## This Page Is Inserted by IFW Operations and is not a part of the Official Record

### **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

### IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents will not correct images, please do not report the images to the Image Problem Mailbox.

Access	DR#	
7100033	$\omega \omega m$	

#### SEARCH REQUEST FORM

#### Scientific and Technical Information Center

Requester's Full Name:		E	xaminer #:	Date:
Art Unit: P	hone Number 30	Domile	Serial Number:	DADED DISK F-MAI
Mail Box and Bldg/Room Lo	ocation:	Results	Format Preferred (circle):	PAPER DISK E-WAI
If more than one search is	*****	*****	*****	*****
Please provide a detailed statemen Include the elected species or struc- utility of the invention. Define an known. Please attach a copy of the	ctures, keywords, synor y terms that may have a	nyms, acronym a special mean	ns, and registry numbers, and coing. Give examples or relevan	ombine with the concept of
Title of Invention:				
Inventors (please provide full na				
Earliest Priority Filing Date:			<del>-</del> .	
*For Sequence Searches Only* Plea appropriate serial number.	se include all pertinent i	information (pa	rent, child, divisional, or issued p	atent numbers) along with the
				•
•				
				,
, t				
				· .
	•			•
*****	******	******	**************************************	**************************************
STAFF USE ONLY	Type of Son	1 4	STN	
Searcher:	AA Sequenc	2	Dialog	
Searcher Location:	Structure (#)		Questel/Orbit	<u> </u>
	Bibliographi	ic	Dr.Link	
Date Completed:	U/ Litigation		Lexis/Nexis	
Searcher Prep & Review Time:	Fulltext		Sequence Systems	
Clerical Prep Time:	Patent Fami	ly	www/Internet	
Online Time:	Other		Other (specify)	

PTO-1590 (1-2000)

Oncogene 1999 Jan 14;18(2):559-64

NGBI PubMed	PubMed QUERY	PubMed ?
Other Formats: Cit Links: Related Art		
Order this docum	ent	

## A tumor specific single chain antibody dependent gene expression system.

Mary MN, Venot C, Caron de Fromentel C, Debussche L, Conseiller E, Cochet O, Gruel N, Teillaud JL, Schweighoffer F, Tocque B, Bracco L

Gene Medicine Department, Rhone-Poulenc Rorer S.A., Vitry-sur-Seine, France.

The design of conditional gene expression systems restricted to given tissues or cellular types is an important issue of gene therapy. Systems based on the targeting of molecules characteristic of the pathological state of tissues would be of interest. We have developed a synthetic transcription factor by fusing a single chain antibody (scFv) directed against p53 with the bacterial tetracycline repressor as a DNA binding domain. This hybrid protein binds to p53 and can interact with a synthetic promoter containing tetracycline-operator sequences. Gene expression can now be specifically achieved in tumor cells harboring an endogenous mutant p53 but not in a wild-type p53 containing tumor cell line or in a non-transformed cell line. Thus, a functional transactivator centered on single chain antibodies can be expressed intracellularly and induce gene expression in a scFv-mediated specific manner. This novel class of transcriptional transactivators could be referred as 'trabodies' for transcription-activating-antibodies. The trabodies technology could be useful to any cell type in which a disease related protein could be the target of specific antibodies.

PMID: 9927213, UI: 99124403

Save the above report in Macintosh ▼ Text ▼ format

Order documents on this page through Loansome Doc

I MIS PAGE BLANK (USPTO)

NGBI PubMed	PubMed QUERY	Publyled ?
Other Formats: C		
Links: Protein		:

Oncogene 1999 Jan 14;18(2):551-7

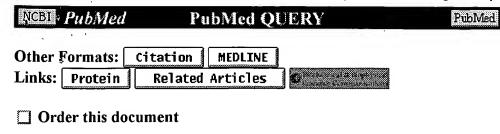
## Restoration of transcriptional activity of p53 mutants in human tumour cells by intracellular expression of anti-p53 single chain Fv fragments.

Caron de Fromentel C, Gruel N, Venot C, Debussche L, Conseiller E, Dureuil C, Teillaud JL, Tocque B, Bracco L

Gene Medicine Department, Rhone-Poulenc Rorer SA, Vitry sur Seine, France.

We report here the production and the properties of single chain Fv fragments (scFvs) derived from the anti-p53 monoclonal antibodies PAb421 and 11D3. 11D3 is a newly generated monoclonal antibody which exhibits properties very comparable to those of PAb421. The scFvs PAb421 and 11D3 are able to stably associate with p53 and to restore the DNA binding activity of some p53 mutants in vitro. When expressed in p53 -/-human tumour cells, the scFv421 is essentially localized in the cytoplasm in the absence of p53, and in the nucleus when exogenous p53 is present. Thus, p53 is also able to stably associate with an anti-p53 scFv in cells. Cotransfection of p53 -/- human tumour cells with expression vectors encoding the His273 p53 mutant and either scFv leads to restoration of the p53 mutant deficient transcriptional activity. These data demonstrate that, in human tumour cells, these scFvs are able to restore a function essential for the tumour suppressor activity of p53 and may represent a novel class of molecules for p53-based cancer therapy.

Save the above report in Macintosh ▼ Text ▼ format	
Order documents on this page through Loansome Doc	·



Biochem Biophys Res Commun 1997 Jan 13;230(2):242-6

#### Characterization of scFv-421, a single-chain antibody targeted to p53.

Jannot CB, Hynes NE

Friedrich Miescher Institute, Basel, Switzerland.

A gene encoding a single-chain antibody (scFv) which specifically binds the tumor suppressor protein p53 has been constructed from RNA of hybridoma cells producing Pab 421. scFv-421 which was expressed and purified from bacteria specifically binds p53. scFv-421, as well as the previously described scFv-FRP5 and -R1R (1), were expressed intracellularly in mammalian cells and targeted to different subcellular locations, including the nucleus, cytoplasm, and endoplasmic reticulum (ER). High levels of all ER targeted scFv proteins, but not nuclear or cytoplasmic targeted proteins, were found in transfected COS-1 cells. In an attempt to stabilize the proteins, sequences encoding the mouse immunoglobin CK constant domain were added to each scFv construct. This led to a moderate increase in the cytoplasmic expression of scFv-FRP5.

PMID: 9016757, UI: 97168950	
Save the above report in Macintosh ▼ Text ▼ format  Order documents on this page through Loansome Doc	·

PubMed

NGEL PubMed	PubMed QUERY
Other Formats: Links: Related	Citation MEDLINE Articles
Order this do	

### Characterization of a new intrabody directed against the N-terminal region of human p53.

Cohen PA, Mani JC, Lane DP

Oncogene 1998 Nov 12;17(19):2445-56

Department of Biochemistry, Medical Sciences Institute, University of Dundee, UK.

Genes encoding the rearranged immunoglobulin heavy and light chain variable regions of DO-1, a monoclonal antibody directed against human p53, have been used to construct a single-chain antibody. DO-1 recognizes an N-terminal epitope in the region involved in the transactivation function of p53 and the binding of Mdm2. The DO-1 single chain scFv expressed in the periplasm of E. coli or at the surface of the filamentous phage M13 retained the immunological specificity and affinity of the full length antibody. Furthermore, the DO-1 recombinant antibody was able to inhibit the in vitro binding of Hdm2, and was shown to be a powerful protecting agent of p53's DNA binding activity at 37 degrees C. The DO-1 single-chain antibody has been used to construct single-chain intracellular antibodies (intrabodies) for expression in the cytoplasm and the nucleus of mammalian cells. These anti-p53 intrabodies were additionally modified by addition of a Ckappa domain to increase cytoplasmic and nuclear stability. Here we show that expression of the DO-1 single-chain antibody in the H1299 cell line results in an inhibition of p53's transactivation function. The DO-1 intrabody is a useful tool to study those functions of p53 driven by the N-terminal region of the protein.

PMID: 9824155, UI: 99039761

Save the above report in Macintosh Text format

Order documents on this page through Loansome Doc

```
Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein search, using sw model
                                                                                                                   10:
11:
12:
12:
13:
14:
15:
16:
17:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-297-181-4
1315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A_Geneseq_36:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               268485 segs, 34193795 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 QVKLQESGAELVRSGASVNL.....YCKQSYNLPTFGGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       February 12, 2001, 15:23:21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.
/SIDS1/gcgdata/geneseq/geneseqp/AA1989.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA19890.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1990.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1991.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1992.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1993.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1994.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1995.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1997.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1999.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1999.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1999.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1999.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                         \SIDSI/gcgdata/geneseq/geneseqp/AA1980.DAT:*
\SIDSI/gcgdata/geneseq/geneseqp/AA1981.DAT:*
\SIDSI/gcgdata/geneseq/geneseqp/AA1982.DAT:*
\SIDSI/gcgdata/geneseq/geneseqp/AA1983.DAT:*
                                                                                                                                                                                                                                                                                                                           /SIDS1/gcgdata/geneseq/geneseqp/AA1987.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1987.DAT:*
                                                                                                                                                                                                                                                                                                                                                                            /SIDS1/gcgdata/geneseq/geneseqp/AA1984.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1985.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1986.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Search time 28.25 Seconds (without alignments) 301.390 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              268485
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

# SUMMARIES

12	11	10	9	œ	7	6	ъ	4	ω	2	1	No.	
906	921	930	932.5	942	951	955	955	961	1024.5	1024.5	1315	Score	
68.9	70.0	70.7	70.9	71.6	72.3	72.6	72.6	73.1	77.9	77.9	100.0	Match Length DB	
281	248	248	437	556	580	535	535	243	673	288	249	ength	
20	20	20	19	20	20	18	18	19	20	20	19	: B	
W82744	Y17964	Y17960	W37738	W90218	W90217	W28492	W28491	W60769	W82742	W82743	W60770	ij	
 Fusion protein pIC	Mouse scFV fragmen	Mouse scFV fragmen	Nucleotide sequenc	Bispecific tetrava	Bispecific tetrava	Human p53 protein	Human p53 protein	Single chain antib	Plasmid pNG4/55.1s	Fusion protein pNG	Single chain antib	Description	

	249 AA.	Protein:	standard:	มี 1 0 พิธีก77ก ระสา	SULT 0770 W60
	DEFORMENTO				
	ATTONNENING				
equ	R3764	86 1	1.		45
vale	Y8092	83 2	:	03.	44
ivale	Y5725	83 2	۲	<u>ვ</u>	43
A protein comprisi	W8809	83 2	۲	03.	42
98	Y1796	42 2	1	0	41
	E907	82	:	07.	40
į-E	R7986	44 1	Ľ	08.	39
Biosynthetic antib	P80154	49 9	۲	09.	38
Anti-EGFR single c	5 R79869	246 16	61.7	811.5	37
Anti-EGFR single c	R7987	42 1		13.	36
Anti-B7.1/anti-B7.	W9022	73 2	1.	81	35
Anti-EGFR single c	R7987	44 1	H		34
Anti-EGFR single C	R7987	42 1	ε,	16.	ယ္သ
Multispecific sing	W7321	01 2	2	$\mathbf{r}$	32
Single chain, huma	W1150	01 1	۲.	81	31
Anti-EGFR single c	R7986	44 1	2.	•	30
Amino acid sequenc	Y2188	38 2	ω.	N	29
Chimaeric human/mu	W0439	69 1	ω	w	28
Human ONS-M21 anti	R7668	69 1	ω	ω	27
fragmen	R3933	77 1	ω.	•	26
acid sequen	Y2188	41 2	٠.	42.	25
Transformant CDM/1	W6383	48 1	4.	84	24
Anti-B7.2 monospec	W9022	63 2	4		23
Human CD30 binding	W5882	48 1	4	85	22
HindIII-EcoRl inse	W3556	32 1	6	•	21
H22-anti-CEA antib	W7322	53 2	ა	~	20
Single chain anti-	W1150	53 1	ა	~	19
15-linker-VI	W0981	82 1	٥.	•	18
dIII-EcoRl ins	W3556	82 1	ა	77.	17
ti-B7.2 monos	W9022	68 2		œ	16
3 antiboo	R7571	70 1	7.	œ	15
use scFV fragme	Y1796	48 2	8	0	14
Fusion protein (80	W8274	66 2	œ	0	13
			٠		

```
Single chain antibody; SCFv D3M; mouse; p53 protein; oligomerisation; regulatory domain; p53 mutant; H273; W248; G281; p53-dependent trans-activating activity; restoration; tumour-suppressing activity; tumour cell; treatment; hyper-proliferation; cancer; re-stenosis; ss.
Restoring p53-dependent trans-activating activity to cell containing mutant p53 - by delivering single-chain antibody specific for the
                                    WPI; 1998-272145/24.
N-PSDB; V36237.
                                                                            Debussche L, Bracco L;
                                                                                                                                                                                    07-MAY-1998
                                                                                                                                                                                                                                      Mus sp.
                                                                                                                                                                                                                                                                                                                                           Single chain antibody (ScFv) D3M that binds to mutant p53 proteins.
                                                                                                                                                                                                                                                                                                                                                                     08-SEP-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                 W60770;
                                                                                                                                                                                                                                                                                                                                                                                                                         W60770 standard; Protein; 249 AA.
                                                                                                                              29-OCT-1996;
                                                                                                                                                          27-OCT-1997;
                                                                                                                                                                                                            WO9818825-A1
                                                                                                      (RHON ) RHONE-POULENC RORER SA
                                                                                                                              96FR-0013176.
                                                                                                                                                          97WO-FR01921.
```

```
YAR SHEET STANDS AND S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 249;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present sequence represents a single chain antibody (ScFv) designated D3M. The antibody binds to an epitope present in the C-terminal region of the p53 protein that includes oligomerisation and regulatory domains, specifically between positions 320 and 393. ScFv D3M is directed against p53 mutants, particularly H273, W248 and G281 mutants. When the ScFv is introduced into cells containing a mutant p53 protein, p53-dependent trans-activating activity is restored. ScFv D3M is specific for p53-mutants that have lost tumour-suppressing activity and are present in tumour cells. It is particularly used to treat hyper-proliferation associated with these mutants (e.g. cancer and re-stenosis) but may also be used in vitro for studying mechanisms of activity of p53 or its mutant and to purify or detect p53.
                                                                                                                                                                                                                                                                                                                                                                                                                           Conjugate; cell targeting; cytotoxic drug; plasmid; fusion protein; prodrug-converting enzyme; cell surface antigen; treatment; cancer; inflammation; rheumatoid arthritis; antibody; prodrug therapy system.
                        Blakey DC,
                                                                              (ZENE ) ZENECA LTD.
                                                                                                                                       10-MAY-1997;
                                                                                                                                                                                                05-MAY-1998;
                                                                                                                                                                                                                                                            19-NOV-1998
                                                                                                                                                                                                                                                                                                                  WO9851787-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fusion protein pNG4/55.1scFv/CPG2 R6/del EcoRI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        W82743 standard; Protein; 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mutant, particularly for treatment of tumours
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gggtkleik 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APNFQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SSGGGGSGGGGGGGDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  apnfqgkatvtadtssntaylhlssltsedttvyycnaviyyeydgyaldywgqgttvtv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    qvklqesgaelvrsgasvnlsctasgfnikdyymhwvkqrpeeglewigyidpesgetey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             249 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; ilarity 100.0%; Conservative 0
                        Emery SC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                       97GB-0009421
                                                                                                                                                                                                   98WO-GB01294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              54pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 1315; DB 19;
Pred. No. 2.6e-88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Lenġth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
RESULT RESULT ID RESULT ID RESULT WE NOT TO WE WE NOT TO THE PROPERTY OF THE P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 194;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This sequence is a used in a method for obtaining a novel gene construct (A) which expresses, in cells of a mammal, a conjugate (B) of a cell-targeting group (I) and a heterologous prodrug-converting enzyme (II), and (B) is directed to leave the cell for selective localisation at a cell surface antigen (Ag) recognised by (I). Delivery of (A) to a target site, then administration of (III) is used for targeted release of cytotoxic drug, specifically for treating cancer but also inflammation such as rheumatoid arthritis. In situ generation of the targeting antibody increases selectivity, reducing side effects at normal tissue. The method is applicable to any antibody-directed enzyme prodrug therapy
                                                                                                                                                                                                                                                                                                                   Conjugate; cell targeting; cytotoxic drug;
cell surface antigen; treatment; cancer; ir
                                                                                                                                                                                                                                                                                                                                                                                              Plasmid pNG4/55.1scFv/CPG2 R6 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     W82742;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   W82742 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1999-059700/05
N-PSDB; V72064.
                             10-MAY-1997;
                                                                           05-MAY-1998;
                                                                                                                                 19-NOV-1998
                                                                                                                                                                                                                                     Synthetic
                                                                                                                                                                                                                                                                                   rheumatoid arthritis; prodrug therapy system.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  10-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         system.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 15; Page 82; 100pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cytotoxic drug in vivo, especially for treatment of cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New gene construct expressing conjugate of targeting agent
prodrug-converting enzyme - useful for, e.g. targeted prod
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 APNFQGKATYTADTSSNTAYLHLSSLTSEDTTYYYCNAYIYYEYDGYALDYWGQGTTYTY 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gggtkleik 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nekfknkatltvdkssttaymqlssltsedsavyycareraygydd-amdywgqgttvtv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qvqlqqpgaelvkpgasvqlsckasgytftgywlhwvkqrpgqglewlgevnpstgrsdy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                               (first
                             97GB-0009421
                                                                              98WO-GB01294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               77.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 1024.5;
Pred. No. 3.4e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .4e-67;
                                                                                                                                                                                                                                                                                                                   inflammation; antibody;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 20; Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             targeted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     production
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             288;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>;</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1;
```

```
В
                                                                                                                                                                                                                                                                                                                                                                            QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Sim
Matches 194;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This sequence is used in a method for obtaining a novel gene construct (A) which expresses, in cells of a mammal, a conjugate (B) of a cell-targeting group (I) and a heterologous prodrug-converting enzyme (II), and (B) is directed to leave the cell for selective localisation at a cell surface antigen (Ag) recognised by (I). Delivery of (A) to a target site, then administration of (III) is used for targeted release of cytotoxic drug, specifically for treating cancer but also inflammation such as rheumatoid arthritis. In situ generation of the targeting antibody increases selectivity, reducing side effects at normal tissue.
                                                                Single chain antibody; ScFv 421; mouse; p53 protein; oligomerisation; regulatory domain; p53 mutant; H273; W248; G281; p53-dependent trans-activating activity; restoration; tumour-suppressing activity; tumour cell; treatment; hyper-proliferation; cancer; re-stenosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New gene construct expressing conjugate of targeting agent and prodrug-converting enzyme - useful for, e.g. targeted production cytotoxic drug in vivo, especially for treatment of cancer
                                                                                                                                                                                                     W60769
               WO9818825-A1
                                                                                                                                               Single chain
                                                                                                                                                                                                                             W60769 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                         08-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (ZENE )
                                                                                                                                                                                                                                                                                                                                                     199
                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                 259
                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                          139
                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                               80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20
                                                                                                                                                                                                                                                         4
                                                                                                                                                                                                                                                                                                                                                QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY 60
                                                                                                                                                                                                                                                                                                                          GGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                    SSGGGGSGGGGSGGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQ 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APNFQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1999-059700/05
                                                                                                                                                                                                                                                                                              gggtkleik
                                                                                                                                                                                                                                                                                                                                                                                                       ssggggsggggggggdielsqspsslavsagekvtmsckssqsllnsrtrknylawyq
                                                                                                                                                                                                                                                                                                                                                                                                                                                            nekfknkatltvdkssttaymqlssltsedsavyycareraygydd-amdywgqgttvtv 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  qvqlqqpgaelvkpgasvqlsckasgytftgywihwvkqrpgqglewigevnpstgrsdy 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ,
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZENECA LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Page 78-79; 100pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Emery
                                                                                                                                               antibody (ScFv) 421 that binds to
                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Æ
                                                                                                                                                                                                                               Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               77.9%;
77.9%;
                                                                                                                                                                                                                                243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 1024.5;
Pred. No. 8.5e
21; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5e-67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ω
3
                                                                                                                                               mutant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                               p53 proteins.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  673;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    بىر
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of.
                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                       198
                                                                                                                                                                                                                                                                                                                                                     258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1;
```

```
RESULT
W28491
ID W2
XX
AC W;
AC W;
DT 2:
DT 2:
XX
XX
KW I
KW I
KW I
                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                      Вp
                                                                                                                                                                                                                                                                                               ş
                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                              ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present sequence represents a single chain antibody (ScFv) designated 421. The antibody binds to an epitope present in the C-terminal region of the p53 protein that includes oligomerisation and regulatory domains, specifically between positions 320 and 393. ScFv 421 is directed against p53 mutants, particularly H273, W248 and G281 mutants. When the ScFv is introduced into cells containing a mutant p53 protein, p53-dependent trans-activating activity is restored. ScFv 421 is specific for p53-mutants that have lost tumour-suppressing activity and are present in tumour cells. It is particularly used to treat hyper-proliferation associated with these mutants (e.g. cancer and re-stenosis) but may also be used in vitro for studying mechanisms of activity of p53 or its mutant and to purify of detect p53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Restoring p53-dependent trans-activating activity to cell mutant p53 - by delivering single-chain antibody specific mutant, particularly for treatment of tumours
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim
                                                        Human p53
                                                                                                                                          W28491 standard: Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Debussche L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   07-MAY-1998
                                                                                     25-NOV-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29-OCT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27-OCT-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (RHON ) RHONE-POULENC RORER SA
                                                                                                                                                                                                                 234
                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                      174
                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                             115
                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                           ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Н
                                                                                                                                                                      ū
                                                                                                                                                                                                                                                                                  QKPGQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLP-T
                                                                                                                                                                                                                                                                                                                                                                                                                                                         QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1998-272140/24
                                                                                                                                                                                                                                         FGGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                        SSGGGGSGGGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLENSRTRKNYLAWYQ
                                                                                                                                                                                                                                                                                                                                                                                  apkfqgkatmtadtssntaylqlsslasedtavyycn----fygdaldywgqgttvtv
                                                                                                                                                                                                                                                                                                                                                                                                                                          qvqlqqsgaelvrsgasvklsctasgfnikdyymhwvkqrpeqglewigwidpengdtey
                                                                                                                                                                                                                                                                     qrpgqspkrliylvskldsgvpdrftgsgsgtdftlkinrveaedlgvyycwqgthsplt
                                                                                                                                                                                                                                                                                                                           ssggggsggggggggggdvlmtqtpltlsvtigqpasisckssqsllds-dgktylnwll
                                                                                                                                                                                                                                                                                                                                                                                                               APNFQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV
                                                                                                                                                                                                                fgagtkleik 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     187;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>ن</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                   Page 31;
                                                      protein variant S-325 encoded by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                    (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bracco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           96FR-0013176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97WO-FR01921.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    54pp; French
                                                                                    entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               73.1%;
                                                                                                                                            535
                                                                                                                                                                                                                                                                                                                                                                                                   23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 961; DB 19;
Pred. No. 1.1e-62;
3; Mismatches 32;
                                                        pEC176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 containing
for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                             173
                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                           60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                 239
                                                                                                                                                                                                                                                                                                                                                                                     114
                                                                                                                                                                                                                                                                      233
```

'n

Leucine zipper (
substitution; r
anti-oncogene; i

r domain; LZD; oligomerisation domain; mutant; mut replacement; transactivation; viral protein VP16; ; oyperproliferation; cancer; restenosis; ScFv;

mutein;

```
δÃ
                                                              밁
                                                                                         Š
                                                                                                                                                    Ş
   밁
                                                                                                                             밁
                                                                                                                                                                                        밁
                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                 CC Claimed variants of protein p53 have at least part of the coligomerisation domain deleted and replaced by a leucine zipper CC domain. The mutants preferably also have at least part of the p53 CC transactivation domain (anno acids 1-74) deleted and replaced by CC the transactivation domain (TD) from herpes simplex virus viral CC protein VP16 (amino acids 411-490) or by a protein domain able to bind selectively to a transactivator, especially a single-chain CC antibody variable domain (SCFV). The present sequence is that of CC a specifically claimed p53 variant designated S-325 and comprising CC a scFv domain, amino acids 75-325 of human wild-type p53 and a CC leucine zipper domain at the C-terminal. The p53 variants are CC more active and more stable tumour suppressors and apoptosis-inducing CC agents than wild-type p53 and are active where the wild-type protein CC mutants, nor by other cellular proteins (because the Leucine zipper CC domain prevents formation of inactive mixed oligomers).
                                                                                                                                                                                                                                                                                                                 Query Mat
Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chimeric -
Chimeric -
                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 36; Pages 88-90; 133pp; French
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New p53 variants e.g. with oligomerisation domain replaced by leucine zipper - useful for treating hyper-proliferative disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1997-132633/12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (RHON ) RHONE POULENC RORER SA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19-JUL-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17-JUL-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  06-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO9704092-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tumour suppression;
                                                               176
236
                                240
                                                                                                                                                         121
                                                                                                                                                                                        63
                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                   Local
                                                                                                                                                                                                                                                                                     L
                                                                                                                                                                                                                                                                                                                                                 Match
                                                                                                                                                                                                                                                                     QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY 60
                                                                                                                                         SSGGGGSGGGGSGGGSDIELTOSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQ 180
                                                                                                                                                                                                        APNFQGKATVTADTSSNTAYLHLSSLTSEDTTVYYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                FGGGTKLEIK 249
                                                  qrpgqspkrliylvskldsgvpdrftgsgsgtdftlkinrveaedlgvyycwqgthsplt
                                                                                             QKPGQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLP-T
                                                                                                                          ssggggggggggggggdvlmtqtpltlsvtigqpasisckssqsllds-dgktylnwll
                                                                                                                                                                                      apkfqgkatmtadtssntaylqlsslasedtavyycn----fygdaldywgqgttvtv
                                                                                                                                                                                                                                                   qvqlqesgaelvgsgasvklsctasgfnikdyymhwvkqrpeqglewigwldpengdtey 62
 fgagtklelk
                                                                                                                                                                                                                                                                                                                    al Similarity
186; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
Herpes simple
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conseiller
                                                                                                                                                                                                                                                                                                                                                                                               535 AA
                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      95FR-0008729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   96WO-FR01111
   245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             simplex virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         apoptosis; single chain antibody variable domain.
                                                                                                                                                                                                                                                                                                                                 72.6%;
                                                                                                                                                                                                                                                                                                                    23;
                                                                                                                                                                                                                                                                                                                  Score 955; DB
Pred. No. 7.2e
23; Mismatches
                                                                                                                                                                                                                                                                                                                  DB 18;
7.2e-62;
nes 33;
                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                            175
                                                               235
                                                                                             239
                                                                                                                                                                                        116
                                                                                                                                                                                                                                                                                                                  ω
```

RESULT

σ

밁

ωμ

ω

Š

```
W28492
Matches 186;
              Query Match
Best Local
                                                                                                                                                 the transactivating domain (TD) from herpes simplex virus viral protein VP16 (amino acids 411-490) or by a protein domain able to bind selectively to a transactivator, especially a single-chain antibody variable domain (ScFv). The present sequence is that of a specifically claimed p53 variant designated S-325H and comprising a ScFv domain, zmino acids 75-325 of human wild-type.p53 (but with Arg182 replaced by His) and a leucine zipper domain at the C-terminal The p53 variants are more active and more stable tumour suppressors and apoptosis-inducing agents than wild-type p53 and are active where the wild-type protein is not, i.e. they are not inactivated by dominant negative or oncogenic mutants, nor by other cellular proteins (because the leucine zipper domain prevents formation of inactive mixed
                                                                                                                                                                                                                                                                                                                                      Claimed variants of protein p53 have at least part of the oligomerisation domain deleted and replaced by a leucine zipper domain. The mutants preferably also have at least part of the p53 transactivation domain (amino acids 1-74) deleted and replaced by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Leucine zipper domain; LZD; oligomerisation domain; mutant; substitution; replacement; transactivation; viral protein V anti-oncogene; hyperproliferation; cancer; restenosis; ScFv
                                                                          Sequence
                                                                                                         been
                                                                                                                                                                                                                                                                                                                                                                                                                   Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                            New p53 variants e.g. with oligomerisation domain replaced by leucine zipper - useful for treating hyper-proliferative disorders,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chimeric -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       W28492
                                                                                                                                  oligomers).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1997-132633/12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bracco L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17-JUL-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               06-FEB-1997.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tumour suppression;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   W28492 standard; Protein; 535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (RHON ) RHONE POULENC RORER SA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19-ЈИГ-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO9704092-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25-NOV-1997
                                                                                                     (Note: this sequence does not appear in the specification and has been produced by modifying the given sequence of variant V-325).
              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          p53 protein variant S-325H.
                                                                                                                                                                                                                                                                                                                                                                                                                 Page -; 133pp; French
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conseiller
                                                                          535 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Herpes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                               and restenosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    95FR-0008729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  96WO-FR01111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note= "Arg residue at position 182 of wild-type
p53 has been mutated to His"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    simplex virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 apoptosis; single
              72.68;
 23;
              Score 955;
Pred. No. 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cancer; restenosis; Scrv;
gle chain antibody variable domain
              .2e
18;
-62;
33;
                            Length
 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              vP16; HSV
 8
Gaps
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
        30-DEC-1998
                                                                                              Misc-difference
                                                                                                                                   Region
                                                                                                                                                    Peptide
                                                                                                                                                                      Region
                                                                                                                                                                                         Domain
                                                                                                                                                                                                          Domain
                                                                                                                                                                                                                           Region
                                                                                                                                                                                                                                             Region
                                                                                                                                                                                                                                                                                                           Key
                                                                                                                                                                                                                                                                                                                             Chimeric
                                                                                                                                                                                                                                                                                                                                      Chimeric
                                                                                                                                                                                                                                                                                                                                             Chimeric -
                                                                                                                                                                                                                                                                                                                                                              allergy; therapy;
BiTAbB7-24-1G10H6.
                                                                                                                                                                                                                                                                                                                                                                       B7 binding molecule; costimulatory molecule; B7.1; CD80; B7.2; CD86; T cell activation; inhibitor; graft versus host disease; transplant rejection; autoimmune disease; allergy; therapy; human; bispecific tetravalent antibody; BiTAb;
                                                                                                                                                                                                                                                                                                                                                                                                                    Bispecific tetravalent antibody BiTAbB7-24-IG10H6
                                                                                                                                                                                                                                                                                                                                                                                                                                       10-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                         W90217;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         W90217 standard; Protein; 580 AA
                          WO9858965-A2
                                                                                                                                                                                                                                                              Peptide
                                                                                                                                                                                                                                                                                Region
                                                                                                                                                                                                                                                                                                  Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ) FGGGTKLEIK 249
|| |||||:|
5 fgagtklelk 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APNFQGKATTTADTSSNTAYLHLSSLTSEDTTYYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QKPGQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLP-T 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               apkfqgkatmtadtssntaylqlsslasedtavyycn-----fygdaldywgqgttvtv
                                                                                                                                                                                                                                                                                                                              1
                                                                                                                                                                                                                                                                                                                                      Homo
                                                                                                                                                                                                                                                                                                                                             Mus sp.
                                                                                                                                                                                                                                                                                                                             synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                              /note= "
                                                                                                261
                                                                                                                                                                                                                                                                                                                                      sapiens
                                                                                                                                                                                                          /note=
274..3
                                                                                                                                                    447..461
                                                                                                                                                                             /note-
                                                                                                                                                                                                                            263..273
                                                                                                                                                                                                                                                                                 25..138
                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                         /note-
                                                                                                                                                             /note=
                                                                                                                                                                                                                                    /note-
                                                                                                                                                                                                                                              154..262
                                                                                                                                                                                                                                                     /note=
                                                                                                                                                                                                                                                                                       /note= "pelB signal peptide"
                                                                                                        note-
                                                                                                                                          note=
                                                                                                                                                                                                'note=
                                                                                                                                                                                                                                                                       'note-
                                                                                                                                                                                                          ..308
                                                                                                                                                                      ..446
                                                                                                                                                                                        ..319
                                                                                      "encoded by
                                                                                                                         "VL region
                                                                                                                                           "(G4S3)flexible linker"
                                                                                                                                                                                                                                                     "(G4S3) flexible linker"
                                                                                                                                                                                                                                                                       "VH region anti B7.1 MAb"
                                                                                                                                                                                               "helix-turn-helix dimerisation domain"
                                                                                                                                                                                                                "human IgG3 hinge region"
                                                                                                                                                                                                                                  "VL region
                                          "codons for these amino acids are not
present in the DNA sequence for
BTITABB7-24-IG1-H6 provided in the
specification"
                                                                                                        "His6
                                                                                                                                                            "VH region anti B7.2 MAb
                                                                                                                                                                              "human
                                                                                                                                                                              IgG3
                                                                                                                         anti B7.2 MAb
                                                                                                                                                                                                                                   anti B7.1 MAb'
                                                                                      CIG.
                                                                                                                                                                              hinge domain"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                116
```

```
밁
                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                δã
                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                               Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                             γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          XXXXXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BITAD is a homodimer of 2 identical molecules, each containing both (2 an anti B7.1 and anti B7.2 scFv (bispecificity). An anti-B7.1 and anti-B7.2 scFv are linked using a dimerisation domain (see (2 W90219)), which drives the homodimerisation of the molecule. DNA (see X01651) encoding the BITAD has been constructed to allow expression of the BITAD in transformed E. coli cells. The BITAD cross-links, and/or cross-reacts, with the costimulatory molecules (B7.1 and B7.2 that are expressed on the membrane of professional cantigen-presenting cells, leading to the inhibition of antigen-cross-collectic T cell activation. The invention relates to such (B7-binding molecules, methods for their production, and their use for treating or preventing diseases of the immune system, in particular graft rejection, graft versus host disease, allergy and cautoimmune diseases (claimed).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                   W90218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This polypeptide comprises the bispecific tetravalent antibody BiTAbB7-24-IG10H6. The molecule consists of 4 scFvs, i.e. 2 anti B7.1 scFvs and 2 anti B7.2 scFvs (tetravalency). One single BiTAb is a homodimer of 2 identical molecules, each containing botl an anti B7.1 and anti B7.2 scFv (bispecificity). An anti-B7.1 and
                          Bispecific tetravalent antibody BiTAb1G10-B7-24H6
                                                           10-MAY-1999
                                                                                                                         W90218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Example 7.1; Fig. 16; 182pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New molecules which bind B7.1 and B7.2 - useful to immune diseases including allograft rejection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bosman A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (INNO-) INNOGENETICS NV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22-JUN-1998;
                                                                                                                                                                                                     565
                                                                                                                                                                                                                                                                    505
                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                  445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                325
                                                                                                                                                                                                                                   241 GGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                              385 npkfegkatltvdkssstaymqlesltsedsavyycarfayygdyyyimdywgqgttvtv
                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
nes 183; Conserv
                                                                                                                                                       æ
                                                                                                                                                                                                                                                                                            QKPGQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLPTF
                                                                                                                                                                                                   gggtkleik
                                                                                                                                                                                                                                                                 qkpgqspklliywastresgvpdrftgsgsgtdfsltissvqaedlavyychqylsswtf
                                                                                                                                                                                                                                                                                                                                               SSGGGGSGGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ssggggsggggggggdieltqspsslavsageevtmtckssqsvlyssnqknylawyq
                                                                                                                                                                                                                                                                                                                                                                                                                               APNFQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY
                                                                                                                         standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Buyse M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          580 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                          (first entry)
                                                                                                                                                                                                     573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            97EP-0870092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98WO-EP03791.
                                                                                                                       Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           72.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Lorre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 951; DE
Pred. No. 1.5e
22; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sablon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 580;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             prevent and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               treat
                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                               444
                                                                                                                                                                                                                                                                                                                                                                                                                                                              384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                    564
                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

B7 binding molecule; costimulatory molecule; B7.1; CD80;

73.3%;

6.5e-61;

0

```
anti B7.1 scrvs and B17ab is a homodimer of 2 identical molecule.

an anti B7.1 and anti B7.2 scFv (bispecificity). An anti-B7.1 and anti-B7.2 scFv (bispecificity). An anti-B7.1 and anti-B7.2 scFv are linked using a dimerisation domain (see w90219), which drives the homodimerisation of the molecule. DNA (see x01652) encoding the B17ab in transformed E. coli cells. The B17ab cross-links, and/or cross-reacts, with the costimulatory molecules B7.1 and B7.2 that are expressed on the membrane of professional antigen-presenting cells, leading to the inhibition of antigen-antigen-presenting cells, leading to the inhibition of antigen-presenting cells, leading to the inhibition of such antigen-presenting cells, leading to the inhibition of antigen-presenting cells.
           specific T cell activation. The Invention and their use B7-binding molecules, methods for their production, and their use for treating or preventing diseases of the immune system, in particular graft rejection, graft versus host disease, allergy and autoimmune diseases (Claimed).
Seguence
                                                                                                                                                                                                                                          This polypeptide comprises the bispecific tetravalent BiTAblGl0-B7-24H6. The molecule consists of 4 scFvs,
                                                                                                                                                                                                                                                                                                                                                                                                 Bosman A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Key
Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CD86; T cell activation; inhibitor; graft versus host disease; transplant rejection; allograft rejection; autoimmune disease; allergy; therapy; human; bispecific tetravalent antibody; BiTAb; BiTAb1G10-B7-24H6.
                                                                                                                                                                                                                                                                                    Example 7.1;
                                                                                                                                                                                                                                                                                                                            New molecules which bind B7.1 and
                                                                                                                                                                                                                                                                                                                                                                                                                             (INNO-) INNOGENETICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                         20-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO9858965-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chimeric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chimeric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chimeric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Region
                                                                                                                                                                                                                                                                                                       ecutes which bind B7.1 and B7.2 - useful to diseases including allograft rejection
                                                                                                                                                                                            10-B7-2446. The molecule consists of 4 scFvs, i.e. 2
10-B7-2446. The molecule consists of 4 scFvs, i.e. 2
1 scFvs and 2 anti B7.2 scFvs (tetravalency). One single s a homodimer of 2 identical molecules, each containing both B7.1 and anti B7.2 scFv (bispecificity). An anti-B7.1 and
                                                                                                                                                                                                                                                                                                                                                         X01652
                                                                                                                                                                                                                                                                                                                                                                                                 Buyse M,
 556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus sp.
Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    synthetic
                                                                                                                                                                                                                                                                                    Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                         97EP-0870092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98WO-EP03791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note= "J
260..285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note- "
427..441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       249..259
                                                                                                                                                                                                                                                                                   18; 182pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   136..248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'note= "(G4S3) flexible linker"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'note= "VH region anti B7.2 MAb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ..426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ..305
                                                                                                                                                                                                                                                                                                                                                                                                                             ₹.
                                                                                                                                                                                                                                                                                                                                                                                                   Lorre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "His6 tag"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "VL region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "(G4S3)flexible linker"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "helix-turn-helix dimerisation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "VL region anti B7.2 MAb"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "human
                                                                                                                                                                                                                                                                                                                                                                                                   ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       region
                                                                                                                                                                                                                                                                                 English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IgG3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IgG3
                                                                                                                                                                                                                                                                                                                                                                                                   Sablon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 anti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hinge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 hinge domain"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B7.1 MAb'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B7.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        region"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MAD"
                                                                                                                                                                                                                                                                                                                            prevent and
                                                                                                                                                                                                                                                       antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             domain"
                                       allergy and
                                                                                                                                                                                                                                                                                                                             treat
```

Query Match

71

. 69

Score

942;

BG

20;

Length

556;

recombinant ribosomal

protein (RIP),

Clavin or its

The

a

conjugate

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity Matches 181; Conserv
      This is the amino acid sequence of a fusion protein comrising of agric single chain antibody (with the heavy and light chain joing a linker), fused to the clavin protein. Clavin is an inhibitor protein, and functions by inactivating the ribosomes. Clavin or conjugates are useful as anticancer and/or antiviral agents. The
                                                                        Claim
                                                                                                       DNA encoding Aspergillus protein, clavin - useful
                                                                                                                                      N-PSDB;
                                                                                                                                                                     Colnaghi M,
                                                                                                                                                                                                                                                                                                                                                                   Chimeric
                                                                                                                                                                                                                                                                                                                                                                             Chimeric
                                                                                                                                                                                                                                                                                                                                                                                                  Recombinant ribosomal inhibitor protein; RIP; clavin; inhibition; protein synthesis; conjugate; Mgr6-clavin; anticancer; antiviral agent.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       07-JUL-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            W37738;
                                                                                                                                                                                                                27-JUN-1996;
                                                                                                                                                                                                                                     26-JUN-1997;
                                                                                                                                                                                                                                                         31-DEC-1997
                                                                                                                                                                                                                                                                                WO9749726-A1.
                                                                                                                                                                                                                                                                                                              Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                Nucleotide sequence encoding the Mgr6-clavin immunotoxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               W37738
                                                                                                                                                                                           (ITUY-) ITAL
                                                                                                                                                                                                                                                                                                                                   Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ø
                                                                                                                                       1998-077109/07
DB; V09256.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gtkleik
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KLQESGAELVRSGASVNLSCTASGENIKDYYMHWVKQRPEEGLEWIGYIDPESGETEYAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ggggsggggggggggdieltqspsslavsageevtmtckssqsvlyssnqknylawyqqk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGGSGGGGGGGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQQK 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 kfegkatltvdkssstaymqlesltsedsavyycarfayygdyyyimdywgqgttvtvss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NFQGKATVTADTSSNTAYLHLSSLTSEDTTYYYCNAVIYYEYDGYALDYWGQGTTVTVSS 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qlqqsqpelekpgasvkisckasgysftghnmnwvkqsngkslewigiidpyyggtsynp
                                                                        4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                standard;
                                                                        Pages 14-15;
                                                                                                                                                                                                                                                                                                                                                                             Aspergillus clavatus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     247
                                                                                                                                                                      De'Santis
                                                                                                                                                                                            MIN UNIV RICERCA SCI & TECNOLOGICA
                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first
                                                                                                                                                                                                                 96IT-FI00155
                                                                                                                                                                                                                                                                                                                                                                   musculus
                                                                                                                                                                                                                                    97WO-EP03359
                                                                                                                                                                                                                                                                                                   287..437
/note= "C
                                                                                                                                                                                                                                                                                                                                    96..
                                                                                                                                                                                                                                                                                                                         /note-
                                                                                                                                                                                                                                                                                                                                            ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       entry)
                                                                     26pp;
                                                                                                                                                                      æ
                                                                                                                                                                                                                                                                                                                        "Mgr6 from M. musculus"
                                                                                                                                                                                                                                                                                                    "Clavin
                                                                                                       clavatus-derived ribosomal inhibitor as an immuno-conjugate and for treatu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 437
                                                                                                                                                                      Mele
                                                                       English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. 6.5
2; Mismatches
                                                                                                                                                                                                                                                                                                     from
                                                                                                                                                                      Ą
                                                                                                                                                                                                                                                                                                     P
                                                                                                                                                                      Parente D;
                                                                                                                                                                                                                                                                                                     clavatus'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                        treatment
                                       joined
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                   of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                        Ьy
                                                                                                        of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 62
```

```
δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ភពនុង
ភពនុង
    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
The invention relates to a method of identifying binding site domains (BSD) that retain the capacity of binding to a predetermined epitope when positioned C-terminal of at least one further domain in a recombinant bior multivalent polypeptide. The method comprises (a) testing a panel of a BSD displayed on the surface of a biological display system as part of a fusion protein for binding to a predetermined epitope, where the fusion protein comprises an additional domain positioned N-terminal of the BSD of the BSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus
                                                                                                                                                                           Claim 27;
                                                                                                                                                                                                                                       Phage display system for identification of binding site
                                                                                                                                                                                                                                                                                                    WPI; 1999-338004/28.
                                                                                                                                                                                                                                                                                                                                              Borschert K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO9925818-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Binding sit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mouse scFV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             04-AUG-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Y17960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           alone are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of clavin)
                                                                                                                                                                                                                 retaining
                                                                                                                                                                                                                                                                                                                                                                                        (KUFE/) KUFER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27 - MAY - 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Y17960 standard; Protein; 248 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        qs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APNEQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FGGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QKPGQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLP-T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SSGGGGSGGGGSGGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQ 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          182;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      fgggtklelk 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ssggggsgggggggggyieltqspaslavslgqratiscrasqsv--stsrysymhwyq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              dpkfqgkatitadtssntaylqlssltsedtavyyc---argeyd-ypfpywgqgtsvtv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   qvqlqesgaelvkpgasvklsctasgfn1kdtymhwvkqrpeqglewigr1dpangntky
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  site domain;
une disease; s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity 72.8
82; Conservative
                                                                                                                                                                         Fig 6.6; 152pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           is used as an immunoconjugate, and the complex and clavin capable of inhibiting ribosomal activity.
                                                                                                                                                                                                                 capacity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                Kufer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                   97EP-0120096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98WO-EP07313
                                                                                                                                                                                                                 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; BSD; epitope;
scFv-antibody;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4-1.
                                                                                                                                                                                                                                                                                                                                                ָּם
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            70.9%;
72.8%;
                                                                                                                                                                                                                   bind
                                                                                                                                                                                                                                                                                                                                              Lutterbuese
                                                                                                                                                                                                                 an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 932.5;
Pred. No. 2.4e
25; Mismatches
                                                                                                                                                                                                                 epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                fusion protein; therapeutic;
single-chain Fv; mouse.
                                                                                                                                                                                                                                                                                                                                              'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2.4e-60;
                                                                                                                                                                                                                                                                                                                                              Raum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          36;
                                                                                                                                                                                                                                                                                                                                              'n
                                                                                                                                                                                                                                                                                                                                                2ettl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                       domains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    437;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4
```

```
RESULT 11
Y17964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
XPXPXXXX
                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SSSSSSSSSSSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and an amino acid sequence that mediates anchoring of the fusion protein to the surface of the display system; and (b) identifying a BSD that binds to the predetermined epitope. The method is useful to identify bior multivalent polypeptides that comprise antibody binding sites capable of efficiently binding to the corresponding antigen. The polypeptides or antibodies identified by the method are useful therapeutically and diagnostically, for e.g. cancer and autoimmune diseases. ScFv-antibody fragments that bind independently of their position within bifunctional single-chain fusion proteins can be isolated from combinatorial antibody libraries using the new in vitro method. Sequences Y17957-965 represent mouse scFV fragments.
        Phage display system for identification retaining capacity to bind an epitope
                                                WPI; 1999-338004/28
N-PSDB; X77247.
                                                                                      Borschert K,
                                                                                                                                         17-NOV-1997;
                                                                                                                                                                                                                                                                      autoimmune
                                                                                                                                                                                                                                                                                Binding
                                                                                                                                                                                                                                                                                                                                     04-AUG-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                 16-NOV-1998;
                                                                                                                                                                                          27-MAY-1999.
                                                                                                                                                                                                                   W09925818-A1.
                                                                                                                                                                                                                                                                                                          Mouse scFV fragment 5-10.
                                                                                                                                                                                                                                                                                                                                                                                     Y17964 standard; Protein; 248
                                                                                                          (KUFE/) KUFER
                                                                                                                                                                                                                                                                                                                                                                                                                                                      242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gtkleik 248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gqppklliygastresgvpdrftgsgsgtdftltissvqaedlavyycqndysypytfgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLP-TFGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FQGKATYTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTVSSG 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          leqsgaelvrpgtsvkisckasgyaftnywlgwvkqrpghglewvgdifpgsgnahynek 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEYAPN 63
                                                                                                                                                                                                                                                              site domain; BSD; epitope;
une diseáse; scFv-antibody;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               248 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                 ;
                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                      Kufer
                                                                                                                                         97EP-0120096
                                                                                                                                                                 98WO-EP07313
                                                                                      P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                70.7%; Score 930; DB 2
72.9%; Pred. No. 2e-60;
tive 25; Mismatches
                                                                                      Lutterbuese
                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                    fusion protein; therapeutic;
single-chain Fv; mouse.
                                                                                      'n
                      of.
                                                                                      Raum
                     binding site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 38;
                                                                                      'n,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 248
                                                                                      Ħ
                      domains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2
```

```
RESULT IN W87744 W87744 W87744 W87744 W87744 W87744 W8774 W8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Sim:
Matches 177;
                                                                                                                                                                                                                                                                                                                                                                         Conjugate; cell targeting; cytotoxic drug; plasmid; fusion protein;
prodrug-converting enzyme; cell surface antigen; treatment; cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        fusion protein for binding to a predetermined epicope, where the fusion protein comprises an additional domain positioned N-terminal of the BSD and an amino acid sequence that mediates anchoring of the fusion protein to the surface of the display system; and (b) identifying a BSD that binds to the predetermined epitope. The method is useful to identify bior multivalent polypeptides that comprise antibody binding sites capable of efficiently binding to the corresponding antiqen. The polypeptides or antibodies identified by the method are useful therapeutically and diagnostically, for e.g. cancer and autoimmone diseases. ScFv-antibody fragments that bind independently of their position within bifunctional single-chain fusion proteins can be isolated from combinatorial antibody libraries using the new in vitro method. Sequences Y17957-965 represent
                                   10-MAY-1997;
                                                                                         05-MAY-1998;
                                                                                                                                                         19-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          W82744 standard; Protein; 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to a method of identifying binding site domains (BSD) that retain the capacity of binding to a predetermined epitope when positioned C-terminal of at least one further domain in a recombinant bior multivalent polypeptide. The method comprises (a) testing a panel of BSD displayed on the surface of a biological display system as part of a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fusion protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 27; Fig 6.10; 152pp; English.
                                                                                                                                                                                                                                                                                                                                             inflammation;
                                                                                                                                                                                                                                                                                                                                                                      prodrug-converting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ر.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4 LQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEYAPN 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ggsggggsggggselvmtqspssltvtagekvtmsckssqsllnsgnqknyltwyqqkp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gtkleik 248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGGSGGGSGGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLENSRTRKNYLAWYQQKP 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 legsgaelvrpgtsvkisckasgyaftnywlgwvkgrpghglewigdifpgsgnihynek 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTVSSG 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 fragments.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                      rheumatoid arthritis; antibody; prodrug therapy system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   pICI266/8061scFvtag/h1s.
                                97GB-0009421
                                                                                                98WO-GB01294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           70.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 921; DB 2
Pred. No. 9e-60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 20; Length 248;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2
```

```
RESULT 13
W82745
밁
                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                 멍
                                                                                                                                                                                                                                                                                                                                                                                                            δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ър
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This sequence is a used in a method for obtaining a novel gene construct (A) which expresses, in cells of a mammal, a conjugate (B) of a cell-targeting group (I) and a heterologous prodrug-converting enzyme (II), and (B) is directed to leave the cell for selective localisation at a cell surface antigen (Ag) recognised by (I). Delivery of (A) to a target site, then administration of (III) is used for targeted release of cytotoxic drug, specifically for treating cancer but also inflammation such as rheumatoid arthritis. In situ generation of the targeting antibody increases selectivity, reducing side effects at normal tissue. The method is applicable to any antibody-directed enzyme prodrug therapy
                                                                                                              Conjugate; cell targeting; cytotoxic drug; plasmid; fusion protein;
prodrug-converting enzyme; cell surface antigen; treatment; cancer;
                                                                   Synthetic
                                                                                                                                                         Fusion protein (806.077 scfv-CPG2)2
                                                                                                                                                                                       10-MAY-1999
                                                                                                                                                                                                                                                W82745 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New gene construct expressing conjugate of targeting agent and prodrug-converting enzyme - useful for, e.g. targeted production of cytotoxic drug in vivo, especially for treatment of cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1999-059700/05
N-PSDB; V72069.
                                       WO9851787-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 16; Page 84-85; 100pp; English.
                                                                                                inflammation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (ZENE ) ZENECA LTD
                                                                                                                                                                                                                                                                                                                        254
                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                  194
                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                           141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY
                                                                                                                                                                                                                                                                                                                                       FGGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                            QKPGQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLP-T
                                                                                                                                                                                                                                                                                                                                                                                                                                                     SSGGGGSGGGCSGGGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLENSRTRKNYLAWYQ 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                fgagtkleik 263
                                                                                                                                                                                                                                                                                                                                                                                 qkpgtspklwiystsnlasgvparfsgsgsgtsysltisrmeaedaatyycqqrstyplt
                                                                                                                                                                                                                                                                                                                                                                                                                                      ssggggsggggsggggggivltgspaimsaspgekvtitcsasssv-----tymhwfg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           281 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                      (first entry)
                                                                                              rheumatoid arthritis; antibody; prodrug therapy system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  68.9%; Score 906; 69.2%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5; DB 20;
1.3e-58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 281;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                               239
                                                                                                                                                                                                                                                                                                                                                                                                                                           193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ω
```

19-NOV-1998

```
밁
                                                                                                                                                                                                                                                                                                                    ρy
                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                               γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 14
Y17965
                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                           멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This sequence is a used in a method for obtaining a novel gene construct (A) which expresses, in cells of a mammal, a conjugate (B) of a cell-targeting group (I) and a heterologous prodrug-converting enzyme (II), and (B) is directed to leave the cell for selective localisation at a cell surface antigen (Ag) recognised by (I). Delivery of (A) to a target site, then administration of (III) is used for targeted release of cytotoxic drug, specifically for treating cancer but also inflammation such as rheumatoid arthritis. In situ generation of the targeting antibody increases selectivity, reducing side effects at normal tissue. The method is applicable to any antibody-directed enzyme prodrug therapy
W09925818-A1.
                                                 Binding site domain; BSD; epitope; fusion protein; therapeutic; autoimmune disease; scFv-antibody; single-chain Fv; mouse.
                                                                                                                     04-AUG-1999
                                                                                                                                                Y17965
                                                                                                                                                                         Y17965 standard; Protein; 248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 17; Page 87-89; 100pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New gene construct expressing conjugate of targeting agent and prodrug-converting enzyme - useful for, e.g. targeted production cytotoxic drug in vivo, especially for treatment of cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Blakey DC, Emery SC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (ZENE ) ZENECA LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-MAY-1998;
                                                                                           Mouse scFV
                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                              191
                                                                                                                                                                                                                                                                                                                                                    138
                                                                                                                                                                                                                                           251
                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                        80
                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                        1999-059700/05
                                                                                                                                                                                                                                           fgagtkleik 260
                                                                                                                                                                                                                                                                                                          QKPGQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLP-T
                                                                                                                                                                                                                                                                    FGGGTKLEIK 249
                                                                                                                                                                                                                                                                                              qkpgtspklwiystsnlasgvparfsgsgsgtsysltisrmeaedaatyycqqrstyplt
                                                                                                                                                                                                                                                                                                                                                   ssggggsgggggggivltqspaimsaspgekvtitcsasssv
                                                                                                                                                                                                                                                                                                                                                                            SSGGGGSGGGGGGGGDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQ 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 666
                                                                                           fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97GB-0009421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98WO-GB01294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             68.98;
69.28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 906; DB 20;
Pred. No. 3.2e-58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 666;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                  -----tymhwfq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10;
                                                               cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of
                                                                                                                                                                                                                                                                                                                                                    190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ψ
```

```
QΥ
                                                                                                                                                                                                                                                           ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                    δÃ
                                                                                                                                                          멍
                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                               δã
                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to a method of identifying binding site domains (CC (BSD)) that retain the capacity of binding to a predetermined epitope when positioned C-terminal of at least one further domain in a recombinant bicompositioned C-terminal of at least one further domain in a recombinant bicom positioned C-terminal of at least one further domain in a recombinant bicom multivalent polypeptide. The method comprises (a) testing a panel of the SSD displayed on the surface of a biological display system as part of a fusion protein for binding to a predetermined epitope, where the fusion protein comprises an additional domain positioned N-terminal of the BSD and an amino acid sequence that mediates anchoring of the fusion protein come to the surface of the display system; and (b) identifying a BSD that the surface of the display system; and (b) identifying a BSD that come fusion to the predetermined, epitope. The method is useful to identify bicome full to the predetermined and the matigen. The polypeptides or antibodies identified by the method are useful therapeutically and confidence in the fusion proteins can be isolated from combinatorial antibody concerns using the new in vitro method. Sequences V17957-965 represent
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
R75719 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Phage display system for identification retaining capacity to bind an epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1999-338004/28.
N-PSDB; X77248.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mouse scFV fragments.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Borschert K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (KUFE/) KUFER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17-NOV-1997;
                                                                                                               243 GTKLEIK 249
                                                                                      242 gtkleik 248
                                                                                                                                                     122
                                                                                                                                                                                                                                             124 GGGSGGGSGGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQQKP 183
                                     15
                                                                                                                                                                                                                                                                                                 65
                                                                                                                                                                                                                                                                                                                                 64 FQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTVSSG 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                   ر.
                                                                                                                                                                                                                                                                                                                                                                                     4 LQESGAELVRSGASVNLSCTASGENIKDYYMHWVKQRPEEGLEWIGYIDPESGETEYAPN 63
                                                                                                                                                                                                                             gggsgggsggggselvmtqspsslamsvgqkvtmsckssqsllnssnqknylawyqqkq
                                                                                                                                                                                                                                                                                                                                                              legsgaelvrogtsvkisckasgyaftnywlgwvkgrpghglewvgdifpgsgnahynek 64
                                                                                                                                                                                                                                                                                             fkgkatltadkssytaymqlssltsedsavyfcarlrnwd---eamdywgqgttvtvssg 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27; Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        248 AA;..
                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7; 152pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kufer P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    97EP-0120096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98WO-EP07313.
   Protein; 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                      68.5%;
70.9%;
                                                                                                                                                                                                                                                                                                                   =
=
=
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Lutterbuese R,
                                                                                                                                                                                                                                                                                                                                                                                                                                  27;
                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 901; DB
Pred. No. 2.5e
27; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of
                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 20;
?.5e-58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Raum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         binding site domains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Η,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 248;
                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                      4:
                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
```

2

26-JAN-1996 (first entry)

MFE-23 antibody.

Antibody; MFE-23; carcinoembryonic antigen; CEA; colorectal tumour;

```
This sequence represents the MFE-23 antibody, which is an antibody against carcinoembryonic antigen (CEA). CEA is a marker antigen for cancer imaging and therapy. The MFE-23 antibody sequence was obtained using phage technology. In this process, mice were immunised with CEA. The antibody variable region genes obtained from these mice were then amplified from cDNA and cloned as a single chain FV (scFV) into bacteriophage vectors, producing a library. The phages that bound to
                                                                                                                                             Antibody for carcinoembryonic antigen - of colorectal cancer
                                                                                                                                                                                         N-PSDB; Q90663.
                                                                                                                                                                                                                                                                                        03-DEC-1993;
                                                                                                                                                                                                     WPI; 1995-215234/28
                                                                                                                                                                                                                                 Begent RHJ,
                                                                                                                                                                                                                                                                                                                   05-DEC-1994;
                                                                                                                                                                                                                                                                                                                                               08-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                           W09515341-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Region
                                                                                                                                                                                                                                                           (CANC-) CANCER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       therapy; diabody.
                                                                                                                  ω
                                                                                                                 Page 48-49; 72pp; English.
                                                                                                                                                                                                                                 Chester
                                                                                                                                                                                                                                                            RES CAMPAIGN TECHNOLOGY.
                                                                                                                                                                                                                                                                                       93GB-0024807
                                                                                                                                                                                                                                                                                                                 94WO-GB02658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note=
27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note=
62..75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note-
52..61
                                                                                                                                                                                                                                                                                                                                                                                                                                             /note= "FR L3"
249..257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note= ".
162..184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note=
27..51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note= "v
162..267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note= "CDR H3"
136..146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers 27..267
                                                                                                                                                                                                                                                                                                                                                                                                                                'note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     210..216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   147..161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .95..209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             85..194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25..135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ..248
                                                                                                                                                                                                                                 KA,
                                                                                                                                                                                                                                                                                                                                                                                                                    267
                                                                                                                                                                                                                                                                                                                                                                                                                                 "CDR L3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "CDR L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "FR L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "linker"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "FR H4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "FR H3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "FR H2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "CDR H1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "variable heavy chain"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "FR L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "CDR H2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "FR H1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "variable region"
                                                                                                                                                                                                                                                                                                                                                                                                     "FR L4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "CDR L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "variable light chain"
                                                                                                                                                                                                                                  Hawkins RE;
                                                                                                                                                           for treatment and diagnosis
                                                                                                              . :
```

```
Ş
                                                                밁
                                                                                             Š
                                                                                                                                 밁
                                                                                                                                                              Š
                                                                                                                                                                                                В
                                                                                                                                                                                                                             Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                9999999999
                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         biotinylated CEA were selected and amplified, and this sequence (and the encoding cDNA) were selected. This sequence was found to have good specificity and affinity for CEA, meaning that it can be used in targeted anti-tumour therapies. A humanised antibody with the complementarity determining regions of MFE-23 may be produced by CDR grafting. The antibody may be used for the tractment by surgery or therapy of a colorectal tumour, or in the diagnosis of a colorectal tumour. MFE-23 may also be used to make diabodies (bivalent or bispecific antibody may also be used to make diabodies (bivalent or bispecific antibody
                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                             antitumour agent or a
                                                                                                                                                                                                                                                                                                                                                                                                                                              fragments which bind to two different antigens), and may be linked to antitumour agent or a detectable label.
                                  236
                                                                  193
                                                                                                  176
                                                                                                                                   140
                                                                                                                                                                116
                                                                                                                                                                                                87
                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                               27
                                                                                                                                                                                                                                                                                              1 QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY
                                                                                   TTVTVSSGGGGSGGGGGGGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLENSRTRKNY
                                                                                                                                                                                                               APNFQGKATYTADTSSNTAYLHLSSLTSEDTTYYYCNAVIYYEYDG----YALDYWGQG
sypltfgagtklelk
                                  NLP-TFGGGTKLEIK 249
                                                                mhwfqqkpgtspklwiystsnlasgvparfsgsgsgtsyslt1srmeaedaatyycqqrs
                                                                                                                               ttvtvssgggqsgggggggggenvltqspaimsaspgekvtitcsasssv-----sy
                                                                                                                                                                                                apkfqgkatfttdtssntaylqlssltsedtavyycn----egtptgpyyfdywgqg
                                                                                                                                                                                                                                                             171;
                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                270 AA;
                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                           67.18;
                                                                                                                                                                                                                                                                                                                                           Score 883; DB 16;
Pred. No. 5.6e-57;
                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                 36;
                                                                                                                                                                                                                                                                                                                                                             Length 270;
                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                 20;
                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             targeted
                                                                                                  235
                                                                                                                                                                 175
                                                                                                                                                                                                139
                                                                                                                                                                                                                                                                 86
                                                                                                                                                                                                                                                                                               60
                                                                                                                                                                                                                                115
                                                                  252
                                                                                                                                   192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 an
                                                                                                                                                                                                                                                                                                                                 4.
```

Search completed: February 12, 2001, 15:23:23 Job time: 38 sec

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Post-processing: Minimum Match 08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence:
                                                                                                                                                                                                                                                     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                             Score
                                                                                                                                             Match Length DB
                                              100.0
73.1
72.6
                                                                                                                                                                Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           924906 seqs, 150866555 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      υS-09-297-181-4
1315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  February 12, 2001, 15:26:21; Search time 76.8 Seconds (without alignments) 489.138 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pending_Patents_AA: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Maximum Match 100%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 QVKLQESGAELVRSGASVNL.....YCKQSYNLPTFGGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /cgn2_6/ptodata/2/paa/US06
                                                                                                                                                                                                                                                                                                                                                                        //gn2_6/ptodata/2/paa/US60_COMB.pep:*
//gn2_6/ptodata/2/paa/US60_COMB.pep:*
//gn2_6/ptodata/2/paa/PCT_NEW_COMB.pep:*
//gn2_6/ptodata/2/paa/US60_LNEW_COMB.pep:*
//gn2_6/ptodata/2/paa/US07_NEW_COMB.pep:*
//gn2_6/ptodata/2/paa/US08_NEW_COMB.pep:*
//gn2_6/ptodata/2/paa/US08_NEW_COMB.pep:*
                                                                                                                                                                                                                                                                                                                                                       /cgn2_6/ptodata/2/paa/US60_NEW_COMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ./ptodata/2/paa/US086_COMB.pep:*
_6/ptodata/2/paa/US088_COMB.pep:*
_6/ptodata/2/paa/US088_COMB.pep:*
_6/ptodata/2/paa/US088_COMB.pep:*
_6/ptodata/2/paa/US089_COMB.pep:*
_6/ptodata/2/paa/US089_COMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          //ptodata/2/paa/US091_COMB.pep:
//ptodata/2/paa/US092_COMB.pep:
//ptodata/2/paa/US093_COMB.pep:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /ptodata,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'ptodata'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /ptodata/2/paa/US094_COMB.pep:*
/ptodata/2/paa/US095_COMB.pep:*
/ptodata/2/paa/US096_COMB.pep:*
/ptodata/2/paa/US097_COMB.pep:*
/ptodata/2/paa/US097_COMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gapext 0.5
US-09-297-181-4

US-09-297-181-2

US-08-983-035-38

US-09-468-029-58

US-09-468-029-60
                                                                                                                                             Ħ
                                                                                                                                                                                                            SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /paa/US084_COMB.pep:*/oaa/US085_COMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S_COMB.pep:*
_COMB.pep:*
                                                                                                                                        Description
                     Sequence 4, Appli
Sequence 2, Appli
Sequence 38, Appl
Sequence 58, Appl
```

45	44	43	42	41	40	39	38	37	36	35 5	34	ω u	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	80	7	O
99.	800.5	03.	03.	03.	03.	08	11.	13.	$\mathbf{H}$	•	16.	-	-	822	22.	•	23.	N	N	N	24.	•	24.	N	w	ω	842.5	84	•	877	~	~	88	•	Φ	0	913.5	•	23.
						<u>}</u>	۳.	۳		:-		۶,	۲	2	.~	2	۲.	2.		۶	۲.	.~		ω.	ω	ω	٠	٠.	4.	თ	თ	ტ	<u>ه</u>	œ.	œ.	8	69.5	9	0
4	4	œ	8	œ	ū	4	4	4	7	4	4	0	0	0	7	7	4	Q,	ū	5	7	7	4	ω	9	σ	4	4	ð	Q	S	ū	9	7	7	σ	240	ω	4
14		œ			ထ				æ			$\sim$	~	S	<b>~</b>	$\sim$					~	~1	7	CD.	$\circ$	$\circ$	an.	w	æ	v	19	17	18	19	19	19	19	19	19
-09-000-802-	-553-	9-443-213-	-392-338-1	-989-846B-1	9-419-788-	-553-497-2	-553-497-2	-553-497-2	9-468-029-	-553-497-3	-553-497-3	9-188-082-	9-364-088-	9-523-279-1	9-523-095A	9-523-095A-3	-553-497-2	S00-19843-	S00-19843-	500-19843-11	9-523-095A-3	9-523-095	9-523-095A-4	9-202-000-2	8-646-265A	8-646-265-1	-202-000-8	8-996-140-2	9-468-029-7	9-188-082-1	-523-279-1	-09-364-088-1	-09-468-029-6	-09-594-985A-	-09-594-985A-	-09-594-985A-	S-09-559-01	-09-559-019-2	-09-594-985A-
ce 13, Ap	ence 28,	equence 19, Ap	uence 19	equence 19, Appl	quence 115, A	equence 22,		equence 26,	ence 72	e ω	equence 30,	equence 14	equence 14	9 14	equence 26,	equence 30, App	equence 20, i	quence 8, Ap	equence 15, ?	equence 11, Appl	equence 32, App	equence 34, App	equence 40, App	equence 2, P	equence 109, Ap	equence 109, Ap	е 8	equence 23, App	equence 76,	equence 16, App	equence 16, App	equence 16, App	equence 68,	equence 7, Appl	equence 6, Appl	equence 4, Appl	quence 27, Ap	equence 28, Āpp	equence 5, Appl

# ALIGNMENTS

```
EARLIER APPLICATION NUMBER: PCT/FR97/01921
EARLIER FILING DATE: 1997-10-27
EARLIER FILING DATE: 1996-10-29
EARLIER FILING DATE: 1996-10-29
NUMBER OF SEQ ID NOS: 4
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 4
LENGTH: 249
TYPE: PRT
ORGANISM: Mus musculus
US-09-297-181-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 1
US-09-297-181-4
  Query Match
Best Local Similarity
Matches 249; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 4, Application US/09297181 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Bracco, Laurent
APPLICANT: Debussche, Laurent
TITLE OF INVENTION: ANTI-P53 SINGLE-CHAIN ANTIBODY FRAGMENTS AND THEIR USES
FILE REFERENCE: S196030-US
                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/297,181
CURRENT FILING DATE: 1999-04-26
    Conservative
                      100.0%;
    0,
Score 1315; DB 16;
Pred. No. 1.2e-108;
; Mismatches 0;
    Indels
                                       Length 249;
    0
    Gaps
    0
```

1 QVKLQESGAEEVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY 60

```
RESULT 3
US-08-083-035-38
US-08-081-085-38
; Sequence 38, Application US/08983035
; GENERAL INFORMATION:
CONCETTLER Emmanuel
                                                                                                                                  В
                                                                                                                                                                 δÃ
                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; TYPE: PRT ; ORGANISM: Mus musculus US-09-297-181-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-297-181-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 2
LENGTH: 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 2, Application US/09297181
GENERAL INFORMATION:
APPLICANT: Bracco, Laurent
APPLICANT: Debussche, Laurent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 187;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/297,181
CURRENT FILING DATE: 1999-04-26
EARLIER APPLICATION NUMBER: PCT/FR97/01921
EARLIER FILING DATE: 1997-10-27
EARLIER APPLICATION NUMBER: FR96/13176
EARLIER APPLICATION NUMBER: FR96/13176
EARLIER FILING DATE: 1996-10-29
NUMBER OF SEQ ID NOS: 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: ANTI-P53 SINGLE-CHAIN ANTIBODY FRAGMENTS AND THEIR USES FILE REFERENCE: ST96030-US
APPLICANT:
                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 SSGGGSGGGGGGGGDIELTQSPSSLAVSAGEKVAMSCKSSQSLENSRTRKNYLAWYQ 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241 GGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181 QKPGQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLPTF 240
                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 APNFQGKATYTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                  FGGGTKLEIK 249
                                                                                                                                                                                                                            QKPGQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLP-T 239
                                                                                                                                                                                                                                                                                          SSGGGSGGGSGGGSDIELTOSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQ 180
                                                                                                                                                                                                                                                                                                                                                                APNFQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                                                                                                                                                                                                                                                                                                                             APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCN-----FYGDALDYWGQGTTVTV 114
                                                                                                                                                                                                                                                                                                                                                                                                                                 QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGŸIDPESGETEY
                                                                                                                                                                                                      QRPGQSPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLT 233
                                                                                                                                                                                                                                                                                                                                                                                                             GGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APNFQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FGAGTKLEIK 243
                                                                                                                                                                                                                                                                        SSGGGGSGGGGGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDS-DGKTYLNWLL 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 73.1%; Score 961; DB 16; 74.8%; Pred. No. 3e-77;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 243;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ω
                                                                                                                                                                                 VQ.
                                                                                                                                                                                                                                                     Ş
                                                                                                                                                    유
                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                          뫄
                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                              US-09-468-029-58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; MOLECULE TYPE: protėin US-08-983-035-38
                                                                                                  RESULT
                                          Sequence 58, Application US/09468029 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 186; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: FR 95/08729
FILING DATE: 19-JUL-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: WO FR96/0111
FILING DATE: 17-JUL-1996
ATTORNEY/AGENT INFORMATION:
NAME: Savitzky Esq., Martin F.
REGISTRATION NUMBER: 29,699
REGISTRATION NUMBER: 29,699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: (610) 454-380 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: BRACCO, TITLE OF INVENTION: TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE/DOCKET NUMBER: ST
TELECOMMUNICATION INFORMATION:
            FITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                                  236 FGAGTKLELK 245
                                                                                                                                                                                                                      176
                                                                                                                                                                                                                                                                                          117
                                                                                                                                                                                   240 FGGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 535 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Collegeville
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PΑ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (610)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          454-3808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          454-3816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               USES THEREOF
            B7-Binding molecules for treating immune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FR 95/08729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO FR96/01111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US/08/983,035
```

```
SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                            181 QKPGQSPKVL1YWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLP-T
                                                                                                                                                                           63 APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCN-----FYGDALDYWGQGTTYTV 116
                                                                                                                                                                                                         61 ADNEQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                                                                                                                                                                                                                                                 SSGGGGSGGGGSGGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQ 180
QRPGQSPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLT
                                                                                        SSGGGGSGGGGGGGGDVLMTQTPLTLSVTIGQPASISCKSSQSLLDS-DGKTYLNWLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          E: Rhone-Poulenc Rorer Inc.
500 Arcola Road, Mailstop 3C43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P53 PROTEIN VARIANTS AND THERAPEUTICAL
                                                                                                                                                                                                                                                                                                                                                                              72.6%; Score 955; DB 13; 74.4%; Pred. No. 2.7e-76;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ST95044-US
                                                                                                                                                                                                                                                                                                                                                                         No.
                                                                                                                                                                                                                                                                                                                                                                                                     Length 535;
                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                            Gaps
                                            239
                                                                                        175
  235
```

ω

Ç,

TITLE OF INVENTION: di NUMBER OF SEQUENCES: 8 COMPUTER READABLE FORM:

MEDIUM TYPE:

Floppy disk

diseases

```
DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                      US-09-468-029-60
                                                                                                                                                                                                                                                                                                                                                                                                                                          멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-468-029-58
                                                                                                                                                                                                                                                                                                                                 Sequence 60, Application US/09468029 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 183;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
              FILING DATE:
INFORMATION FOR SEQ ID NO: 60:
SEQUENCE CHARACTERISTICS:
LENGTH: 556 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE:
HYPOTHETICAL: N
ANTI-SENSE: NO
                                                                                                                                                    MEDIUM TYPE: Floppy disk
COMPOTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                         TITLE OF INVENTION: B7-Bindir
TITLE OF INVENTION: diseases
NUMBER OF SECUENCES: 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
LENGTH: 580 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: PRIOR APPLICATION DATA:
                                                                                  PRIOR APPLICATION DATA: APPLICATION NUMBER:
                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   445
                                                                                                                                                                                                                                                                                                                                                                                                                                          565 GGGTKLEIK 57,3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121 SSGGGGSGGGGGGGDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQ 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       385 NPKFEGKATLTVDKSSSTAYMQLESLTSEDSAVYYCARFAYYGDYYYIMDYWGQGTTVTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 APNFQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                                                                                                     FILING DATE:
                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: li
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QKPGQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLPTF 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SSGGGGSGGGSGGGSDIELTQSPSSLAVSAGEEVTMTCKSSQSVLYSSNQKNYLAWYQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QVQLQQSGPELEKPGASVKISCKASGYSFTGHNMNWVKQSNGKSLEWIGIIDPYYGGTSY 384
amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                580 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                72.3%;
73.5%;
                                                                                                                                                                                                                                                                                        B7-Binding molecules for treating immune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US/09/468,029
                                                                                  PCT/EP98/03791
                                                                                                                                       US/09/468,029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PCT/EP98/03791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 951;
Pred. No. 6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .8e-76;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 580;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                        (EPO)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         444
```

```
δõ
                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ΩV
                                                                                                                                                                                                                                                                        ; OTHER INFORMATION: synthesized US-09-594-985A-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-594-985A-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-468-029-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT
                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: WordPerfect
SEQ ID NO 5
LENGTH: 242
TYPE: PRT
ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ouery Match
Best Local Similarity
Matches 181; Conserv
                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 175; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Barbera-Guillem, Emilio
APPLICANT: Nelson, M. Bud
APPLICANT: INCENTION: individual against shed antigen-specific B cells
                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: US OF PRIOR FILING DATE: 1999-06-16
NUMBER OF SEQ ID NOS: 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/09/594,985A CURRENT FILING DATE: 2000-09-12
                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: linea:
MOLECULE TYPE: pro
HYPOTHETICAL: NO
ANTI-SENSE: NO
                                                                                                                                                                                                                                                                                                        LOCATION:
                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   63
                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRANDEDNESS:
                                                                                 61 APNFQGKATYTADTSSNTAYLHLSSLTSEDTTYYYCNAVIYYEYDGYALDYWGQGTTYTV 120
                                                                                                              3 KLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEYAP 62
SSGGGGSGGGSGGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGGGSGGGGSGGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQQK 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KFEGKATLTVDKSSSTAYMQLESLTSEDSAYYYCARFAYYGDYYYIMDYWGQGTTVTVSS 120
                                                 NEKFKGKATLTADKSSSTAYMQLNSLTSEDSAVYFCKRSYY------GHWGQGTTVTV 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTKLEIK 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PGQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLPTFGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGGSGGGGSGGGSDIELTQSPSSLAVSAGEEVTMTCKSSQSVLYSSNQKNYLAWYQQK 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NFQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTVSS 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QLQQSGPELEKPGASVKISCKASGYSFTGHNMNWVKQSNGKSLEWIGIIDPYYGGTSYNP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PGQSPKLLIYWASTRESGVPDRFTGSGSGTDFSLTISSVQAEDLAVYYCHQYLSSWTFGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/09594985A
                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein
                                                                                                                                                                                   70.2%; Score 923.5;
70.0%; Pred. No. 6.20
tive 29; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     71.6%; Score 942; DB 18; 73.3%; Pred. No. 4.1e-75; tive 22; Mismatches 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 us 60/139,521
                                                                                                                                                                                                        .2e-74;
                                                                                                                                                                                                                     DB 19;
                                                                                                                                                                                       37;
                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 556;
                                                                                                                                                                                                                     Length 242;
                                                                                                                                                                                     9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                     Gaps
                 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              242
                                                                                                                                                                                     2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

0,

```
APPLICANT: Witte, Larry
APPLICANT: Witte, Larry
FILE OF INVENTION: Antibodies Specific to KDR and Uses Thereof
FILE REFERENCE: Sequence Listings 1-34 for 381-71
CURRENT APPLICATION NUMBER: US/09/559,019
CURRENT FILING DATE: 2000-04-25
NUMBER OF SEQ ID NOS: 34
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 28
LENGTH: 238
TYPE: PRT
ORGANISM: Mouse
US-09-559-019-28
              Sequence 27, Application US/09559019
(SENERAL INFORMATION:
APPLICANT: Edu, Zhenping
APPLICANT: Witte, Larry
ITILE OF INVENTION: Antibodies Specific to KDR and Uses Thereof
FILE REFERENCE: Sequence Listings 1-34 for 381-71
CURRENT APPLICATION NUMBER: US/09/559,019
CURRENT FILING DATE: 2000-04-25
NUMBER OF SEQ ID NOS: 34
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 27
LENGTH: 240
TYPE: PRT
CORGANISM: Mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 7
US-09-559-019-28
US-09-559-019-28
; Sequence 28, Application US/09559019
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                       US-09-559-019-27
                                                                                                                                                                                                                                                                                                                                                                                   뭐
                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
US-09-559-019-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 176; Conserv
                                                                                                                                                                                                                                                                                                                                                                                     229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121 SSGGGSGGGGGGGGDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQ 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181 QKPGQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLP-T 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 233 FGAGTKLVLK 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240 FGGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               173 OKPGQSPKLLIYWASARESGVPDRFTGSGSGTDFTLSISSVKTEDLAVYYCQQYYSYPLT 232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181 QKPGQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLP-T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             113 SSGGGGSGGGGGGGDIVMSQSPSSLPVSVGEKVTLSCKSSQSLLYSGNQKNYLAWYQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APNFQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                                                                                                                                                                                                                                                                                                                                                                     FGSGTKLEIK 238
                                                                                                                                                                                                                                                                                                                                                                                                                         FGGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APKFQGKATMTADSSSNTAYLQLSSLTSEDTAVYYCNA-YYGDYEG----YWGQGTTVTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QKPGTSPKLWIYSTSNLASGVPARFSGSGSGTSYSLTISRMEAEDAATYYCQQRSSYPFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SSGGGGSGGGGGGSDIELTQSPAIMSASPGEKVTITCSASSSV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QVKLQQSGAELVGSGASVKLSCTTSGFNIKDFYMHWVKQRPEQGLEWIGWIDPENGDSDY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                69.8%;
70.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 917.5; DB 19;
Pred. No. 2.1e-73;
""smatches 31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -SYMHWFQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4
```

```
В
                                                                                                                                         γQ
                                                                                                                                                                             밁
                                                                                                                                                                                                            Qy
 ρ
                                                                 QΥ
                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                         LOCATION: Synthesized US-09-594-985A-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 9
US-09-594-985A-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: WOI
SEQ ID NO 4
LENGTH: 262
TYPE: PRT
                                                                                                                                                                                                                                                                                                      Best Local Similarity 68.8%; Matches 172; Conservative 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 4, Application US/09594985A GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 69.5
Best Local Similar; ty 70.4
Matches 176; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: US OF PRIOR FILING DATE: 1999-06-16 NUMBER OF SEQ ID NOS: 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION:
TITLE OF INVENTION:
FILE REFERENCE: B-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/09/594,985A CURRENT FILING DATE: 2000-09-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Barbera-Gu
APPLICANT: Nelson, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM: Artificial sequence FEATURE: NAME/KEY:
240 FGGGTKLEIK 249
                                    193
                                                                     181
                                                                                                        133
                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                116 SSGGGGSGGGGGGGDIELTQSPAIMSASPGEKVTITCSASSSV-----SYMHWFQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240 FGGGTKLEIK 249
                                                                                                                                                                                              61 APNFQGKATYTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                                                                                                                                                             80
                                                                                                                                                                                                                                                   20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 APNFQGKATYTADTSSNTAYLHLSSLTSEDTTYYYCNAVIYYEYDGYALDYWGQGTTYTV 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 APKFQGKATMTADSSSNTAYLQLSSLTSEDTAVYYCNA-YYGDYEG----YWGQGTTVTV 115
                                                                                                                                                                                                                                                                 1 QVKLQESGAELVRSGASVNLSCTASGENIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY 60
                                QKPGQSPKVL1YWASTRESGYPDRFTGSGSGTDFTLTISSYQAEDLAVYYCKQSYNLP-T 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QKPGQSPKVLJYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLP-T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QVKLQQSGAELVGSGASVKLSCTTSGFNIKDFYMHWVKQRPEQGLEWIGWIDPENGDSGY 60
                                                                                                      SEGGGSGGGGGGGTVMSQSPSSLPVSVGEKVTLSCKSSQSLLVSGNQKNYLAWYQ
                                                                                                                                       SSGGGGSGGGGGGGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQ 180
                                                                                                                                                                             NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTRSL-----NMAYWGQGTSVTV 132
                                                                                                                                                                                                                                                 QVQLQQSDAELVKPGASVKISCKASGYTFTDHAIHWVKQNPEQGLEWIGYFSPGNDDFKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QKPGTSPKLWHYSTSNLASGVPARFSGSGSGTSYSLTISRMEAEDAATYYCQQRSSYPFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SSGGGGSGGGGSGGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQ 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FGSGTKLEIK 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WordPerfect
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Barbera-Guillem, Emilio
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Vaccine formulations and methods for immunizing an individual against shed antigen-specific B cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bud
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           69.5%; score 913.5; DB 19; 70.4%; Pred. No. 4.7e-73; tive 29; Mismatches 32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       us 60/139,521
                                                                                                                                                                                                                                                                                                                     31;
                                                                                                                                                                                                                                                                                                                     Score 906; DB 19;
Pred. No. 2.5e-72;
1; Mismatches 39
                                                                                                                                                                                                                                                                                                                                                       DB 19;
                                                                                                                                                                                                                                                                                                                      39;
                                                                                                                                                                                                                                                                                                                                                      Length 262;
                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 240;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13;
                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                          192
                                                                                                                                                                                                                                                   79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                168
                                                                                                                                                                                                                                                                                                                     Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4;
```

В

253 FGAGTKLVLK 262

US-09-594-985A-6

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; NAME/KEY:
; LOCATION:
; OTHER INFORMATION: synthesized
US-09-594-985a-6
                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              멇
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          οy
                                                                                                                                                                                                                                                                                                                                         US-09-594-985A-7
SOFTWARE: WO
SEQ ID NO 7
LENGTH: 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS: 21
SOFTWARE: WordPerfect
SEQ ID NO 6
LENGTH: 271
TYPE: PRT
ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                            Sequence 7, Application US/09594985A GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 6, Application US/09594985A GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/594,985A
CURRENT FILING DATE: 2000-09-12
PRIOR APPLICATION NUMBER: US 60/139,521
PRIOR FILING DATE: 1999-06-16
                                                                                      CURRENT APPLICATION NUMBER: US/09/594,985A CURRENT FILING DATE: 2000-09-12 PRIOR APPLICATION NUMBER: US 60/139,521 PRIOR FILING DATE: 1999-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Barbera-Guillem, Emilio APPLICANT: Nelson, M. Bud TITLE OF INVENTION: Vaccine formula TITLE OF INVENTION: individual aga
                                                                                                                                                                                                   APPLICANT: Barbera-Guillem, Emilio APPLICANT: Nelson, M. Bud TITLE OF INVENTION: Vaccine formula TITLE OF INVENTION: individual aga.
                                                                    NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  135 SSGKTTPPVGGGGGGGGGGGGGGGDIVMSQSPSSLPVSVGEKVTLSCKSSQSLLYSGNQK 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                    255 YYSYPLTFGAGTKLVLK 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            234 SYNLP-TFGGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     174 NYLAWYOOKPGOSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKO 233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              83 NEKFKGKATLTADKSSSTAYMQLNSLTSEDSAVYFCKRSYY-----GHWGQGTTLTV 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                  REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NYLAWYQQKPGQSPKLLIYWASARESGVPDRFTGSGSGTDFTLSISSVKTEDLAVYYCQQ 254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APNFQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QVQLQQSDAELVKPGASVKISCKASGYTFTDHAIHWAKQKPEQGLEWIGYISPGNDDIKY 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SS------GGGGSGGGGGGGGGDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRK 173
                                                 WordPertect
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B-25np
                                                                                                                                                                                                     individual against shed antigen-specific B cells
                                                                                                                                                                                                                            Vaccine formulations and methods for immunizing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        individual against shed antigen-specific B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Vaccine formulations and methods for immunizing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 68.2%; Score 897; DB 19; Length 271; 66.9%; Pred. No. 1.6e-71;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ω
```

```
US-09-468-029-68; Sequence 68, Applicat; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δõ
δÃ
                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     덩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; OTHER INFORMATION: synthesized US-09-594-985A-7
                                   밁
                                                                                                                                                                                                 US-09-468-029-68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Sim
Matches 172;
                                                                                                      Ouery Match
Best Local Similarity
Matches 173; Conserv
                                                                                                                                                                                                                                                                                                                                       FILING DATE: *
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                            MOLECULE NO HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA: APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                195 KNYLAWYQQKPGQSPKLLIYWASARESGVPDRFTGSGSGTDFTLSISSVKTEDLAVYYCQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           233 QSYNLP-TFGGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23
61 APNFQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                   23
                                                                                                                                                                                                                                                                    STRANDEDNESS:
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 APNFQGKATYTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                         TYPE:
                                                                  1 QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY 60
                                                                                                                                                                                                                                                                                                                        LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY 60
                                   QVQLQQSGPELEKPGASVKISCKASGYSFTGHNMNWVKQSNGKSLEWIGIIDPYYGGTSY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QYYSYPLTFGAGTKLVLK 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KNYLAWYQQKPGQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCK 232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SSAKTTPPSVGGGGSGGGGGGGGGDIVMSQSPSSLPVSVGEKVTLSCKSSQSLLYSGNQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SS------GGGGGGGGGGGGGGDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTR 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NEKFKGKATLTADKSSSTAYMQLNSLTSEDSAVYFCKRSYY-----GHWGQGTTLTV 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QVQLQQSDAELVKPGASVKISCKASGYTFTDHAIHWAKQKPEQGLEWIGYISPGNDDIKY 82
                                                                                                                                                                                                                                                                                                       amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Application US/09468029
                                                                                                                                                                                                                                                                                                                          268 amino acids
                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                     protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B7-Binding molecules for treating immune diseases.
                                                                                                                        66.9%; Score 880; DB 18; 69.5%; Pred. No. 5.1e-70;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      68.2%; Score 896.5; DB 1 66.7%; Pred. No. 1.8e-71;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               80
                                                                                                                                                                                                                                                                                                                                                                                              PCT/EP98/03791
                                                                                                                                                                                                                                                                                                                                                                                                                                                  US/09/468,029
                                                                                                      22;
                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     38;
                                                                                                                                         Length 268;
                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 272;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17;
                                                                                                         10;
                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                     82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  254
                                                                                                        1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ω
```

```
DЪ
B
                           Ş
                                                                                     δÃ
                                                                                                                                                                                                   ; TOPOLOGY: linear; MOLECULE TYPE: protein US-09-364-088-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-364-088-16 -
                                                                                                                      Query Match
Best Local Similarity
Matches 169; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 16, Application US/09364088 GENERAL INFORMATION:
                                                                                                                                                                                                                                             INFORMATION FOR SEQ ID NO: 1
SEQUENCE CHARACTERISTICS:
LENGTH: 553 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOTTWARE: PATENTIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/364,088
                                                                                                                                                                                                                                                                                                                                        REGISTRATION NUMBER: 38,872
REFERENCE/DOCKET NUMBER: MX.
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US 0 FILING DATE: 07-JUNE-1996 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES: 16
CORRESPONDENCE ADDRESS:
ADDRESSEE: LAHIVE & COCKFIELD, LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: THERAPEUTIC COMPOUNDS COMPRISED TITLE OF INVENTION: OF ANTI-FC RECEPTOR ANTIBODIES NUMBER OF SEQUENCES: 16
                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
NAME: Remillard, Jane E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk
338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                           278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181 QKPGQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLPTF 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
              TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US 0 FILING DATE: 07-JUNE-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET:
                                                        PKFQGKATFTTDTSSNTAYLQLSSLTSEDTAVYYCN-----EGTPTGPYYFDYWGQGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGTKLEIK 261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SSGGGGSGGGGGGGGGGDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQ 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Boston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    28 State Street, 24th Floor
                                                                                                                                                                                                                                                                                                           : (617)227-7400
(617)742-7414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          USA
                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Yashwant M. Deo, et al.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -SGGGGSDIELTQSPSSLAVSAGEEVTMTCKSSQSVLYSSNQKNYLAWYQ
                                                                                                                                      66.7%;
                                                                                                                                                                                                                                                                                              16:
                                                                                                                      29;
                                                                                                                                                                                                                                                                                                                                                           MXI-043CP2
                                                                                                                                                                                                                                                                                                                                                                                                                                      08/484,172
                                                                                                                    Score 877; DB 17;
Pred. No. 2.4e-69;
9; Mismatches 36;
                                                                                                                                                    Length 553;
                                                                                                                      Indels 20;
                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 192
                                                                                                                      4;
```

1

```
RESULT 15
US-09-188-082-16
                                                                                                                                                                                            Š
                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                            δõ
                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                             δõ
                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; ORGANISM: Mus musculus US-09-523-279-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 14
US-09-523-279-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PQ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: Pa
SEQ ID NO 16
LENGTH: 553
TYPE: PRT
                                                              Sequence 16, Application US/09188082 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 16, Applica
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: 09/188,082
PRIOR EILING DATE: 1998-11-06
PRIOR APPLICATION NUMBER: 08/661,052
PRIOR EILING DATE: 1996-07-07
PRIOR APPLICATION NUMBER: 08/484,172
PRIOR FILING DATE: 1995-07-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/09/523,279
CURRENT FILING DATE: 2000-03-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION:
TITLE OF INVENTION:
FILE REFERENCE: MXI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: PRIOR FILING DATE: 1999-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
               APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                               504
                                                                                                                                                                                237 LP-TFGGGTKLEIK 249
                                                                                                                                                                                                                                444
                                                                                                                                                                                                                                                              177
                                                                                                                                                                                                                                                                                              391
                                                                                                                                                                                                                                                                                                                             117
                                                                                                                                                                                                                                                                                                                                                               338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      117
                                                                                                                                                                                                                                                                                                                                                                                                                            278 IKLQQSGAELVRSGTSVKLSCTASGFNIKDSYMHWLRQGPEQGLEWIGWIDPENGDTEYA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ||| ||||||| 504 YPLTFGAGTKLELK 517
                                                                                                                                                                                                                                                                                                                                                                                               62
                                                                                                                                                                                                                                                                                                                                                                                                                                               AWYQQKPGQSFKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYN 236
                                                                                                                                                                                                                                                                                                               TVTVSSCGGGSGGGSGGGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYL 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AWYQQKPGQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYN 236
                                                                                                                                                            YPLTFGAGTKLELK 517
                                                                                                                                                                                                                                HWFQQKPGTSPKLWIYSTSNLASGVPARFSGSGSGTSYSLTISRMEAEDAATYYCQQRSS
                                                                                                                                                                                                                                                                                                                                                             PKFQGKATFTTDTSSNTAYLQLSSLTSEDTAVYYCN-----EGTPTGPYYFDYWGQGT
                                                                                                                                                                                                                                                                                                                                                                                             PNFQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDG-----YALDYWGQGT 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TVTVSSGGGGSGGGGSGGGSENVLTQSPAIMSASPGEKVTITCSASSSV-----SYM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TVTVSSGGGGSGGGSGGGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYL 176
                                                                                                                                                                                                                                                                                             TVTVSSGGGGGGGGGGGGENVLTQSPAIMSASPGEKVTITCSASSSV-----SYM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LP-TFGGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HWFQQKPGTSPKLWIYSTSNLASGVPARFSGSGSGTSYSLTISRMEAEDAATYYCQQRSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           169;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Yashwant M. Deo et al.
YENTION: THERAPEUTIC COMPOUNDS COMPRISES OF ANTI-FC RECEPTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Application US/09523279
Chezian Somasundaram
                Robert Graziano
                              Joel Goldstein
                                               Yashwant M. Deo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MXI-043CP3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1999-07-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .66.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       09/364,088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 877; DB 19;
Pred. No. 2.4e-69;
9; Mismatches 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 553;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                               390
                                                                                                                                                                                                                                                                                                                                                                                                                               337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         503
                                                                                                                                                                                                                                 503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       443
```

4:

```
; TOPOLOGY: 1:
; MOLECULE TYPE:
US-09-188-082-16
                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 169; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: (617)227-5941
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: MX TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US/09/188,0 FILING DATE.
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/661,052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION: NAME: Arnold, Beth E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES: 1
                                                                                              177 AWYQQKPGQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYN 236
                                                                                                                                                                                                                                                                                                        504 YPLTFGAGTKLELK 517
                    237 LP-TFGGGTKLEIK 249
                                                                                                                                                     391 TVTVSSGGGGSGGGGSGGGSENVLTQSPAIMSASPGEKVTITCSASSSV-----SYM 443
                                                                                                                                                                                                                                338 PKFQGKATFTTDTSSNTAYLQLSSLTSEDTAVYYCN-----EGTPTGPYYFDYWGQGT 390
                                                                          444 HWFQQKPGTSPKLWIYSTSNLASGVPARFSGSGSGTSYSLTISRMEAEDAATYYCQQRSS 503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH:
                                                                                                                                                                                                                                                      62 PNFQGKATYTADTSSNTAYLHLSSLTSEDTTYYYCNAVIYYEYDG-----YALDYWGQGT 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE:
                                                                                                                                                                           TVTVSSGGGGSGGGGSGGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLENSRTRKNYL 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                02109-1875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            s: 553 amino acids amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Boston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         E: LAHIVE & COCKFIELD 60 State Street, Suite 510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (617)227-5941
(77) TD NO: 16:
                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (617)227-7400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein
                                                                                                                                                                                                                                                                                                                                                                                       66.7%; Score 877; DB 27; Length 553; 66.5%; Pred. No. 2.4e-69; ative 29; Mismatches 36; Indels 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      THERAPEUTIC COMPOUNDS COMPRISED OF ANTI-FC RECEPTOR ANTIBODIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US/09/188,082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  35,430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MXI-043CP
                                                                                                                                                                                                                                                                                                                                                                                         20;
                                                                                                                                                                                                                                                                                                                                                                                     Gaps
```

Search completed: February 12, 2001, 15:26:22 Job time: 212 sec

δã

B Ş

B

Вþ

В δõ 밁

```
Q
                                                                                                                                                                                                                                                                                                        BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                      δÃ
                                                В
                                                                                             В
                                                                                                                δÃ
                                                                                                                                             밁
                                                                                                                                                                   δÃ
                                                                                                                                                                                                                Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT
A57272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멍
  밁
                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    госиз
                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 589
                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                      source
                        241
  268
                                                  208
                                                                        181
                                                                                                148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           403
                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     718
                                                                                                                                               88
                                                                                                                                                                    61
                                                                                                                                                                                            28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15
             CCTGAACAGGCCTGGAGTGGATTGGATGGATTGATCCTAAGAATGGTGATACTGAATAT
                                                                                                                                                                                                       caggtcaagctgcaggagtcaggggcagaacttgtgaggtcaggggcctcagtcaatttg
                                                                                                                                                                                                                                                                                                                                                              1 (bases 1 to 768)
Bracco,L., Schweighoffer,F. and Tocque,B.
CONDITIONAL EXPRESSION SYSTEM
Patent: WO 9630512-A 4 03-OCT-1996;
RHONE POULENC ROKER SA (FR)
Other publication AU 5402096 961016
Other publication FR 2732348 961004.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _CTGCAGCTCAGCAGCCTGGCATCTGAGGACACTGCCGTGTATTATTGTAAT-----
                                                            gccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacacacctcc 240
                                                                                                           tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagagg
                                                                                                                                                                                                                                            589;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gtgcaggctgaagacctggcagtttattactgcaagcaa---tcttataatctaccgacg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gtccctgatcgcttcacaggcagtggatctgggacagatttcactctcaccatcagcagt 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cagaaaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctgga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         aaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATGACCCAAACTCCACTCACTTTGTCGGTTACCATTGGACAACCAGCCTCCATCTCTTTGC
                                                                                                                                            TCCTGCACAGCTTCTGGCTTCAACATTAAAGACTACTATATGCACTGGGTGAAGCAGAGG
                                                                                                                                                                                             CAGGTGCAGCTGCAGCTCTGGGGCCAGAGCTTGTAAGGTCAGGGGCCTCAGTCAAGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTGGAGGCTGAGGATTTGGGGAGTTTATTATTGCTGGCAAGGTACACATTCTCCGCTTACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTCCCTGACAGGTTCACTGGCAGTGGATCAGGGACAGATTTCACACTTAAAATCAACAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGAGGCCAGGCCAGTCTCCAAAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAGTCAAGTCAGAGCCTCTTGGA---TAGTGATGGAAAAACATATTTGAATTGGTTGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 4 from Pate
A57272
A57272.1 GI:3713167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                unidentified unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A57272
                                                                                                                                                                                                                                            Similarity 78.
89; Conservative
                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                  /db_xref="taxon:32644"
185 c 218 g
                                                                                                                                                                                                                                                                                                                                          organism="unidentified"
                                                                                                                                                                                                                                                      60.6%;
78.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ď
                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                          Score 452.8; DB 81
Pred. No. 5.8e-122;
0; Mismatches 137;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA
W09630512.
                                                                                                                                                                                                                                                                                                                    184
                                                                                                                                                                                                                                                                   DB 81;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PAT
                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                   Length 768;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    03-MAR-1998
                                                                                                                                                                                                                                            24;
                                                                                                                                                                                                                                           Gaps
                                                                                              .207
                                                                                                                                                                     120
                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   540
                         300
                                                                                                                                             147
                                                                                                                                                                                             87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            462
  318
                                                267
```

```
밁
                     Š
                                            В
                                                                 δÃ
                                                                                           밁
                                                                                                              ρy
                                                                                                                                        밁
                                                                                                                                                            δÃ
                                                                                                                                                                                     밁
                                                                                                                                                                                                        Ş,
                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                 멍
                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                  ğ
727
                       718
                                              667
                                                                  661
                                                                                            607
                                                                                                                  601
                                                                                                                                        547
                                                                                                                                                             541
                                                                                                                                                                                      490
                                                                                                                                                                                                          481
                                                                                                                                                                                                                                   430
                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                 370
                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                               319
                                                                                                                                                                                                                                                                                                                                                     301
          ttcggcggggcaccaagctggaaatcaaa 747
                                                         gtgcaggctgaagacctggcagtttattactgcaagcaa---tcttataaatctaccgacg
                                                                                                      gtccctgatcycttcacagycagtgyatctgygyacagatttcactctcaccatcagcagt
                                                                                                                                         CAGAGGCCAGGCCAGTCTCCAAAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGA
                                                                                                                                                     asatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag
                                                                                                                                                                                                                                                ctcacccagtctccatcttccctggctgtgtcagcaggagagaggtcgctatgagctgc 480
                                                                                                                                                                                                                                                                              tcctcaggtgyaggcggttcaggcggaggtggctctggcggtggcggatcggacattgag
                                                                                                                                                                                                                                                                                                                             TTCGGTGCTGGCACCAAGCTGGAAATTAAA
                                              GTGGAGGCTGAGGATTTGGGAGTTTATTATTGCTGGCAAGGTACACATTCTCCGCTTACG
                                                                                           GTCCCTGACAGGTTCACTGGCAGTGGATCAGGGACAGATTTCACACTTAAAATCAACAGA
                                                                                                                                                                                     AAGTCAAGTCAGAGCCTCTTGGA----TAGTGATAGGAAAAACATATTTGAATTGGTTGTTA 546
                                                                                                                                                                                                                                   ATGACCCAAACTCCACTCACTTGTCGGTTACCATTGGACAACCAGCCTCCATCTCTTGC
756
                                                                                                                                                                                                                                                                                                        420
                                                                                                                                                               600
                                                                    717
                                                                                            666
                                                                                                                  660
                                                                                                                                         606
                                                                                                                                                                                                          540
                                                                                                                                                                                                                                 489
                                                                                                                                                                                                                                                                                 429
                                                                                                                                                                                                                                                                                                                               369
```

Search completed: February 17, 2001, 22:58:00 Job time: 35041 sec

밁

67 61

```
ttcggcggggcaccaagctggaaatcaaa 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gtccctgatcgcttcacaggcagtggatctgggacagatttcactctcaccatcagcagt 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cagaaaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctgga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            aaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | teeteaggtggaggeggtteaggeggaggtggetetggeggtggeggateggaeattgag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tactatgaatacgacgctatgctttggactactggggccaagggaccacggtcaccgtc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ctgcacctcagcagcctgacatctgaggacacaaccgtctattactgtaatgcagtcatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacacaccctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTCGGTGCTGGGACCAAGCTGGAGCTGAAA 735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTGGAGGCTGAGGATTTGGGAGTTTATTATTGCTGGCAAGGTACACATTCTCCGCTCACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gtgcaggctgaagacctggcagtttattactgcaagcaa---tcttataatctaccgacg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTCCCTGACAGGTTCACTGGCAGTGGATCAGGGACAGATTTCACACTGAAAATCAACAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGAGGCCAGGCCAGTCTCCAAAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAGTCAAGTCAGAGCCTCTTGGA----TAGTGATGGAAAGACATATTTGAATTGGTTGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCTCAGGTGGAGGCGGTTCAGGCGGAGGTGGCTGGCGGGTGGCGGATCGGATGTTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -----TTTTACGGGGATGCTTTGGACTACTGGGGCCAAGGGACCACGGTCACCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGCAGCTCAGCAGCCTGGCATCTGAGGACACTGCCGTCTATTATTGTAAT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCCCCGAAGTTCCAGGGCAAGGCCACTATGACTGCAGACACATCCTCCAATACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCTGAACAGGGCCTGGAGTGGATTGGATGGATTGATCCTGAGAATGGTGATACTGAATAT
                                                                                                                                                                                                                                                                                            antibody; immunoglobulin s
synthetic construct
synthetic construct
artificial sequence.
1 (bases 1 to 729)
                                                                                                                                                                                  Caron de Fromentel,C., Gruel,N., Venot,C., Debussche,L.,
Conseiller,E., Dureuil,C., Teillaud,J.L., Tocque,B. and Bracco,L.
Restoration of transcriptional activity of p53 mutants in human
tumour cells by intracellular expression of anti-p53 single chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACO131532 729 bp
Synthetic construct
linker sequence
  Direct Submission
Submitted (16-DEC-1998) de
                                                    2 (bases 1 to 729)
de Fromentel,C.
                                                                                                         Oncogene 18 (2),
99124402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                AJ13153
                                                                                                                                                                 Fv fragments
                                                                                                                                                                                                                                                                                                                                                                                                                                    AJ131532.1 GI:4033863
                                                                                                                                     551-557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mRNA
anti-p53
                                                                                                                                                                                                                                                                                                                                                                                                        superfamily;
                                                                                                                                     (1999)
     Fromentel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ScFv
     <u>ر.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SYN
antibody
                                                                                                                                                                                                                                                                                                                                                                                                           SCFV;
     q
     380 INSERM, Institut
                                                                                                                                                                                                                                                                                                                                                                                                           variable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16-MAR-2000
(scFv421) containing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     297
δÃ
                                                       В
                                                                                                    Ş
                                                                                                                                                              В
                                                                                                                                                                                                                 δ.
                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                        δã
                                                                                                                                                                                                                                                                                                                                                                               Ď,
                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 590; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      V_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
     421
                                                       343
                                                                                                            361
                                                                                                                                                              292
                                                                                                                                                                                                                 3<u>0</u>1
                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ۔
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ш
ctcacccagtctccatcttccctggctgtgtcagcaggagagaggtcgctatgagctgc
                                                                           tcctcaggtg3aggcggttcaggcggaggtggctctggcggttggcggatcggacattgag
                                                                                                                                                                                       tactatgaatacgacggctatgctttggactactggggccaagggaccacggtcaccgtc
                                                                                                                                                                                                                                                                                                 gccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacacacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCTGAACAGGGCCTGGAGTGGATTGGATGGATTGATCCTGAGAATGGTGATACTGAATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatat 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCCTGCACAGCTTCTGGCTTCAACATTAAAGACTACTATATGCACTGGGTGAAGCAGAGG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGGTGCAGCTGCAGCAGTCTGGGGGCAGAGCTTGTAAGGTCAGGGGCCTCAGTCAAGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCTCAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCCGGTGGCGGATCGGATGTTTTG
                                                                                                                                                                                                                                                                     CTGCAGCTCAGCATCTGAGGACACTGCCGTGTATTATTGTAAT-----
                                                                                                                                                                                                                                                                                                                                                                                  GCCCCGAAGT.FCCAGGGCAAGGCCACTATGACTGCAGACACATCCTCCAATACAGCCTAC
                                                                                                                                                              ------TTTTACGGGGATGCTTTGGACTATTGGGGCCAAGGGACCACGGTCACCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ٠.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60.8%; nilarity 78.7%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                176 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /product="immunoglobulin
.132. .243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /COGOT_STATT=1
/COGOT_STATT=1
/COGOT_STATT=1
/Trans1_table=11
/product="anti-p53 SCFV antibody (scFv421)"
/trans1ation="QVVIQQSABLORSGASVKLSCTASGFNIKDYYMHWVKQRPEQG
/trans1ation="QVVIQQSABLATION*/CNFTYSCNTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAVIANCESCASABLASGEOTOTILSVINGENTAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Mus musculus"
/db_xref="taxon:10090"
168 c 205 g 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Mus musculus"
/db_xref="taxon:10090"
117. .131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="synthetic construct"
/db_xref="taxon:32630"
/cell_line="PAb421"
/cell_type="hybridoma"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Mus musculus"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="synthetic"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'product-"immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tocus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       inker sequence"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 454.4; DB 12
Pred. No. 2e-122;
0; Mismatches 136;
```

180

ct

DB 12;

Indels Length

24;

Gaps

Ç,

120

60 60 light chain

variable

heavy

chain

variable

JOURNAL MEDLINE REFERENCE AUTHORS TITLE JOURNAL

RESULT 14 ACO131532 LOCUS

DEFINITION

밁

646

Ωy B

661 586 601 526 541 469 481 409 421 349 361 298 301

Š

밁

706 718 Ş

δÃ 밁 δÃ

В

Š В Q

밁

В

Ş В δõ 멍 Š

241

187 181 127 121

밁 Š

KEYWORDS SOURCE ORGANISM ACCESSION VERSION

REFERENCE

TITLE AUTHORS

342

360

291

240 180

240

402 420

```
Cochin
FRANCE
        de
        Genetique Moleculaire,
         22
         rue Mechain
         PARIS,
         75014,
```

```
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                       BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
A59386
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                QΥ
                                                                        밁
                                                                                        Qy
                                                                                                                В
                                                                                                                                  δÃ
                                                                                                                                                         망
                                                                                                                                                                            Qy
                                                                                                                                                                                                   В
                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
            δã
                                멍
                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 592
                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                source
                                 .
301
361,tcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggacattgag
                                                                                                                                                                                                                                                                                  . Local Simes 592;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               483
                                                     301
                                                                                            241
                                                                                                                  190
                                                                                                                                      181
                                                                                                                                                          130
                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               726
                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                            10
                                                                                                                                                                                                   70
                                                                                                                                                                                                                                                                ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12
                                                                                                                                                                                                 gccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacacacctac
                                                                                                                                                                                                                                                      caggtcaagctgcaggagtcaggggcagaacttgtgaggtcaggggcctcagtcaatttg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gggcaccaagctggaaatcaaa 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    agggcagtctcctaaagtgctgatctactgggcatccactagggaatctggagtccctga
                                          tactatgaatacgacggctatgctttggactactggggccaagggaccacggtcaccgtc
                                                                     CTGCAGCTCAGCCTGGCATCTGAGGACACTGCCGTCTATTATTGTAAT------
                                                                                                                                                            CCTGAACAGGGCCTGGAGTGGATTGGATGGATTGATCCTGAGAATGGTGATACTGAATAT
                                                                                                                                                                     cctgaagagggcctggagtggattggatatattgatcctgagagtggtgataactgaatat
                                                                                                                                                                                                                                            CAGGTGCAGCTGCAGGAGTCAGGGGGCCAGAGCTTGTGGGGGTCAGGGGCCTCAGTCAAGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGGACCAAGCTTGAGATCAAA 744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGAAGACCTGGCAGTTTATTACTGTCAGAATGATTATAGTTATCCGCTCACGTTCGGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tgaagacctggcagtttattactgcaagcaatcttata---atctaccgacgttcggcgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCAGAGTCTGTTAAACAGTGGAAATCAAAAGAACTACTTGACCTGGTACCAGCAGAAACC
                                                                                                                 GCCCGAAGTTCCAGGGCAAGGCCACTATGACTGCAGACACATCCTCCAATACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
A59386
A59386.1
                                                                                                                                                                                                                                                                                                                                                                                    i (bases 1 to 749)
Conselller_E. and Bracco, L.
P53 PROTEIN VARIANTS AND THERAPEUTICAL
Patent: WO 9704092-A 36 06-FEB-1997;
RHONE POULENC RORER SA (FR)
Other publication FR 2736915 970124.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A59386
                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 unclassified
                                                                                                                                                                                                                                                                                                                                                  173
                                                                                                                                                                                                                                                                                     Conservative
                               -TTTTACGGGGATGCTTTGGACTACTGGGGCCAAGGGACCACGGTCACCGTC
                                                                                                                                                                                                                                                                                                                                                  ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              36
                                                                                                                                                                                                                                                                                                                                                /organism="unidentified"
/db_xref="taxon:32644"
179 c 221 g 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GI:3714722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              from
                                                                                                                                                                                                                                                                                             61.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ďď
                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                             Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA
W09704092.
                                                                                                                                                                                                                                                                                    red. No. 2.2e
Mismatches
                                                                                                                                                                                                                                                                                         DB 81;
7.2e-123;
                                                                                                                                                                                                                                                                                                                                                                                                                                    USES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PAT
                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                    THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         06-MAR-1998
                                                                                                                                                                                                                                                                                     24;
                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         809
                                                    360
                                                                                                                                                            189
                                                                                                                                                                               180
                                                                                                                                                                                                   129
                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                            69
                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 899
                                351
                                                                         300
                                                                                            300
                                                                                                                 249
                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               542
                                                                                                                                                                                                                                                                                    ω
```

```
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
ACCESSION
VERSION
                                                                                                                                             BASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
A59381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
          QΥ
                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
TITLE
                                                             Query Match
Best Local
                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                            CDS.
                                                                                                                                             COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           352 TCCTCAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGATGTTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATGACCCAAACTCCACTCACTTTGTCGGTTACCATTGGACAACCAGCCTCCATCTCTTGC
                                               592;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gtgcaggctgaagacctggcagtttattactgcaagcaa---tcttataatctaccgacg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGAGGCCAGGCCAGTCTCCAAAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ctcacccagtctccatcttccctggctgtgtcagcaggagagaggtcgctatgagctgc
caggtcaagctgcaggagtcaggggcagaacttgtgaggtcagggggcctcagtcaatttg 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ttcggcggggcaccaagctggaaatcaaa 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTGGAGGCTGAGGATTTGGGAGTTTATTATTGCTGGCAAGGTACACATTCTCCGCTCACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cagaaaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctgga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAGTCAAGTCAGAGCCTCTTGGA----TAGTGATGGAAAGACATATTTGAATTGGTTGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              aaatccagtcngagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTCGGTGCTGGGACCAAGCTGGAGCTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTCCCTGACAGGTTCACTGGCAGTGGATCAGGGACAGATTTCACACTGAAAATCAACAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
A59381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RHONE
Other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        unclassified.

1 (bases 1 to 1611)

1 (bases 1 to 1611)

Conseiller E. and Bracco, L.

P53 PROTEIN VARIANTS AND THERAPEUTICAL

Patent: WO 9704092-A 31 06-FEB-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           unidentified unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A59381.1 GI:3714713
                                                             Similarity
                                                                                                                                               369
                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                           POULENC RORER SA (FR)
publication FR 2736915 970124
Location/Qualifiers
                                                                                                                                             ρı
                                                                                                                                                                                                           /translation="MAQVQLQESGAELVGSGASVKLSCTASGENIKDYYMHWVKQRPE
GGLEWIGWIDENGDTEYAPKTGKATWADTSSNTAYLQLSSLASEDTAVYYCNFYG
DALDYWGOGTTYTVTSSGGGGSGGGGSGGGSDYLMTOTPLTLSVTIGQPASISCKSSO
SLLDSDGKTYLNWLLQRPGQSPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEA
EDLGVYYCGWGCHLSFLTEGGASWCTCTXSPALNKWECQLAKTCPVQLWVDSTPPPG
VPSQKTYGGSVGFRLGFLHSGTAKSVTCTXSPALNKWECQLAKTCPVQLWVDSTPPPG
TRYRAMAIYKQSQHMTEVVRRCPHHERCSDSDGLAPPQHLIYVEGNLRVEYLDDRNTF
                                                                                                                                           ALKEKLKALEEKLKALVGER"
443 c 458 g 341 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31 from Patent
                                                                                                                                                                              RHSVVVPYEPPEVGSDCTTIHYNYMCNSSCMGGMNRRPILTIITLEDSSGNLLGRNSF
EVRVCACPGRDRRTEEENLRKKGEPHHELPPGSTKRALPNNTSSSPQPKKKPLDGDLK
                                                                                                                                                                                                                                                                                                                          /protein_id="CAA03533.1"
/db_xref="GI:3714714"
                                                                                                                                                                                                                                                                                                                                                                           'note="unnamed protein product"
                                                                                                                                                                                                                                                                                                                                                             codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                            'db_xref="taxon:32644"
                                                                                                                                                                                                                                                                                                                                                                                                                           'organism="unidentified"
                                                                                                                                                                                                                                                                                                                                                                                                .1608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1611
                                                             61.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ďα
                                               0
                                              Score 457.6; DB 81;
Pred. No. 2.3e-123;
0; Mismatches 134;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA
WO9704092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               738
                                               Indels
                                                                            Length 1611;
                                               24;
                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           411
                                               ω
```

DЪ

7

CAGGTGCAGC1GCAGGAGTCAGGGGCCAGAGCTTGTGGGGTCAGGGGGCCTCAGTCAAGTTG

66

```
Qy
                                         밁
                                                             Qy
                                                                                        밁
                                                                                                                                                             Ş
                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
TITLE
밁
                                                                                                            Ş
                                                                                                                                      밁
                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                 멍
                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                           οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 1
AX003772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                           543
603
                     609
                                                                  549
                                                                                          483
                                                                                                                489
                                                                                                                                        423
                                                                                                                                                               429
                                                                                                                                                                                     363
                                                                                                                                                                                                           369
                                                                                                                                                                                                                                  312
                                                                                                                                                                                                                                                         309
                                                                                                                                                                                                                                                                                 252
                                                                                                                                                                                                                                                                                                      249
                                                                                                                                                                                                                                                                                                                              192
                                                                                                                                                                                                                                                                                                                                                                           132
                                                                                                                                                                                                                                                                                                                                                                                               129
                                                                                                                                                                                                                                                                                                                                                    189
                                                                                                                                                                                                                                                                                                                                                                                                                                             69
                                                                                                                                                                                                                                                                                                                                                                                                                       72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                       tcgcttcacaggcagtggatctgggacagatttcactctcaccatcagcagtgtgcaggc
                                                        agggcagtctcctaaagtgctgatctactgggcatccactaggggaatctggagtccctga, 608
                                                                                                                                                   gtctccatcttccctggctgtgtcagcaggagagaggtcgctatgagctgcaaatccag
                                                                                                                                                                                                 CAGTAGCCTGACATCTGAGGACTCTGCTGTCTATTTCTGTGCAAGATTGCGGAACTGGGA
                                                                                                                                                                                                                                                                                           cagcagcctgacatctgaggacacaaaccgtctattactgtaatgcagtcatctactatga
                                                                                                                                                                                                                                                                                                                                        gggcctggagtggattggatatattgatcctgagagtggtgaaactgaatatgccccgaa
                                                                                                                                                                                                                                                                                                                                                                                                                                  agcttctggcttcaacattaaagactactatatgcactgggtgaaacagagggcctgaaga 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gctgcaggagtcaggggcagaacttgtgaggtcagggggcctcagtcaatttgtcctgcac 68
TCGCTTCACAGGCAGTGGATCTGGAACAGATTTCACTCTCACCATCAGCAGTGTGCAGGC
                                           AGGGCAGCCTCCTAAACTGTTGATCTACGGGGCATCCACTAGGGAATCTGGGGTCCCTGA
                                                                                                                                       GTCTCCATCCTCCCTGAGTGTGTCAGCAGGAGAGAGGTCACTATGAGCTGCAAGTCCAG
                                                                                                                                                                                    TGGTGGTTCTGGCGGCGGCGGCTCCGGTGGTGGTGGTTCTGAGCTCGTGATGACACA
                                                                                                                                                                                                                                                                                                                             GTTCAAGGGCAAAGCCACACTGACTGCAGACAAGTCCTCGTACACAGCCTATATGCAGCT
                                                                                                                                                                                                                                                                                                                                                                         TGGACTTGAATGGGTTGGAGATATTTTCCCTGGAAGTGGTAATGCTCACTACAATGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                      GGCTTCTGGATACGCCTTCACTAACTACTGGCTAGGTTGGGTTAAGCAGAGGCCTGGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCTCGAGCAGTCTGGAGCTGAGCTGGTAAGGCCTTGGGACTTCAGTGAAGATATCCTGCAA 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   585;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AX003772
Sequence
AX003772
AX003772.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus sp.

Eukaryota; Metazoa; Chordata;

Mammalla; Eutheria; Rodentia;

1 (bases 1 to 744)

Kufer, P. and Raum, T.

Kufer, P. and Raum, T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          wethod of identifying binding sit of binding to an epitope patent: WO 9925818-A 27-MAY-1999; KUFER PETER (DE); RAUM TOBIAS (DE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Mus sp."
/db_xref="taxon:10095"
172 c 219 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 from Patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GI:9927573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             62.4%;
78.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           744 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 466; DB 11;
Pred. No. 7.7e-126;
); Mismatches 145;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO9925818.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Craniata; Vertebrata;
Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (DE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                domains.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ROD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                that
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              retain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24-AUG-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the capacity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                        542
                                            602
                                                                                                               548
                                                                                                                                      482
                                                                                                                                                              488
                                                                                                                                                                                     422
                                                                                                                                                                                                           428
                                                                                                                                                                                                                                                                                                      308
                                                                                                                                                                                                                                                                                                                                                                                               188
                                                                                                                                                                                                                                                                                                                                                                                                                      131
662
                                                                                                                                                                                                                                  362
                                                                                                                                                                                                                                                      368
                                                                                                                                                                                                                                                                               311
                                                                                                                                                                                                                                                                                                                                                                         191
                                                                                                                                                                                                                                                                                                                             251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2;
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
              Ş
                                      밁
                                                         γġ
                                                                                    뭕
                                                                                                           2
                                                                                                                                       В
                                                                                                                                                             QY
                                                                                                                                                                                      멍
                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                          δõ
                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 11
AX003780
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
               489
                                       423
                                                               429
                                                                                      363
                                                                                                               369
                                                                                                                                        312
                                                                                                                                                               309
                                                                                                                                                                                       252
                                                                                                                                                                                                              249
                                                                                                                                                                                                                                       192
                                                                                                                                                                                                                                                               189
                                                                                                                                                                                                                                                                                       132
                                                                                                                                                                                                                                                                                                              129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   669
                                                                                                                                                                                                                                                                                                                                      72
                                                                                                                                                                                                                                                                                                                                                             69
                                                                                                                                                                                                                                                                                                                                                                                      12
                                                                                                                                                                                                                                                                                                                                                                                                             9
tcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcagcagaaacc
                                       GTCTCCATCCTCCCTGACTGTGACAGCAGGAGAGAAGGTCACTATGAGCTGCAAGTCCAG
                                                    gtctccatcttccctggctgtgtcagcaggagagagatgctcattgagctgcaaatccag
                                                                                                                                                     atacgacggctatgctttggactactgggggccaagggaccacggtcaccgtctcctcagg
                                                                                                                                                                                                     cagcagcctgacatctgaggacacaaccgtctattactgtaatgcagtcatctactatga
                                                                                                                                                                                                                                     cttccagggcaaggccactgtgactgcagacacatcctccaacacagcctacctgcacct 248
                                                                                                                                                                                                                                                                                                   agcttctggcttcaacattaaagactactatatgcactgggtgaaacagaggcctgaaga 128
                                                                                                                                                                                                                                                                                                                                                                                                   TGGTGGTGGTTCTGGCCGCCGCCGCCCCGTGGTGGTTGTCTGAGCTCGTGATGACACA
                                                                                                   tggaggcggttcaggcggaggtggctctggcggtggcggatcggacattgagctcaccca
                                                                                                                                                                                       CAGTAGCCTGACATTTGAGGACTCTGCTGTCTATTTCTGTGCAAGACTGAGGAACTGGGGA
                                                                                                                                                                                                                                                                                       TGGACTTGAGTGGATTGGAGATATTTTCCCTGGAAGTGGTAATATCCACTACAATGAGAA 191
                                                                                                                                                                                                                                                                                                                                      GGCTTCTGGA;ACGCCTTCACTAACTACTGGCTAGGTTGGGTAAAGCAGAGGCCTGGACA 131
                                                                                                                                                                                                                                                                                                                                                                                    GCTCGAGCAGICTGGAGCTGAGCTGGTAAGGCCTGGGACTTCAGTGAAGATATCCTGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gggcaccaagctggaaatcaaa 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGAAGACCTGGCAGTTTATTACTGTCAGAATGATTATAGTTATCCGTACACGTTCGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tgaagacctggcagtttattactgcaagcaatcttataatctaccg---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGGACCAAGCTTGAGATCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                     583;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AX003780
Sequence:74
AX003780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Method of identifying binding site of binding to an epitope Patent: WO 9925818-A 27-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Kufer, P. and Raum,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KUFER PETER (DE); RAUM TOBIAS (DE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AX003780.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mmalia; Eutheria; (bases 1 to 744)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              183
                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                       · CGAGCCTATGGACTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ω.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Mus sp."
/db_xref="taxon:10095"
174 c 212 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1. .744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Jutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   744
from E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GI:9927577
                                                                                                                                                                                                                                                                                                                                                                                                                                                 62.0%;
78.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                      0,
                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 462.8; DB 11;
Pred. No. 6.7e-125;
D; Mismatches 147;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA
W09925818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            domains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ROD
                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            that
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -acgttcggcgg
|||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            retain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24-AUG-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                     12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the
                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                      482
                                                              488
                                                                                      422
                                                                                                                                       362
                                                                                                                                                               368
                                                                                                                                                                                       311
                                                                                                                                                                                                              308
                                                                                                                                                                                                                                    251
                                                                                                                                                                                                                                                                                                                                                                                      71
               548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            capacity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  725
                                                                                                                                                                                                                                                                                                                                                                                                                                     2
```

```
gene
                                           gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene
                                                                                                                                                             misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             V_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              V_region
                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                              misc_feature
                                                                                                                                                                                                                                                                                                                                       V_region
                                                                                                                                                                                                                                                                                                                                                                                                V_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                        gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           misc_feature
                                                                                                                                                                                                          source
                                                                                                                                                                                                                                           misc_feature
                                                                                                                                                                                                                                                                                                                                                              gene
                                                                                                                                                                                                                                                                                                                                                                                                                                V_region
                                                                 rep_origin
                                                                                        terminator
                                                                                                                                                                                                                                                                                                     /product="VI hypervariable 856. .882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <>>/4. .>918
/gene="Vl"
                                                                                                                            1360.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /product="Vh hypervariable domain 331. .381
        complement(2720. .3580)
/gene="bla"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TFGAGTKLELKRA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /protein_id="CAA74919.1"
/db_xref="GI:4376153"
/translation="DIEITOSPSSLSVSAGEKVTMSCKSSQSLLNSGNQNNDLAWYQQ
KPGQRPKLLIYGASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCQNDHSYPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="insert part 1"
/organism="Mus musculus"
/db_xref="taxon:10090"
                                complement(2720.
/gene="bla"
                                                     1463. .2720
/note="ColE1 origin"
                                                                                        /note="encodes 5x histidine tags for IMAC purification"
1418. 1462
                                                                                                                                                /gene="scFv-215"
                                                                                                                                                                      /organism="Streptomyces
/db_xref="taxon:1895"
                                                                                                                                                                                                                   'note="encodes core streptavidin"
                                                                                                                                                                                                                                 /gene="scFv-215"
                                                                                                                                                                                                                                                      /gene="scFv-215"
/note="encodes linker
                                                                                                                                                                                                                                                                                                                                                                                     /gene="CDR-L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'gene="CDR-H1"
                                                                                                              /gene="scFv-215"
                                                                                                                                    'note="encodes epitope
                                                                                                                                                                                            'note="insert part 2"
                                                                                                                                                                                                                                                                                          ′gene=
                                                                                                                                                                                                                                                                                                                            /gene="CDR-L3"
                                                                                                                                                                                                                                                                                                                                                  'gene="CDR-L2"
                                                                                                                                                                                                                                                                                                                                                                                                                         /gene="CDR-L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /product≖"immunoglobulin light chain, kappa variable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /codon_start=1
/transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'note="encodes Gly-Ser linker peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gene="scFv-215"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      product="Vh hypervariable domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'gene≖"CDR-H3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               'gene="CDR-H2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'gene="CDR-H2"
                                                                                                                                                                                                                                                                                                                                                                         product="V1 hypervariable
                                                                                                                                                                                                                                                                                                                                                                                                         product="VI hypervariable domain
                                                                                                                                                                                                                                                                                                                                                                                                                                              'gene="CDR-L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'gene="CDR-H3"
                                                                                                                                                                                                                                                                               . 933
                                                                                                                                                                                                                                                                                          "CDR-L3"
                                           .3580)
                                                                                                                                                                                                                                                      peptide"
                                                                                                                                       of.
                                                                                                                                                                                   avidinii"
                                                                                                                                   monoclonal antibody Myc1-9E10"
                                                                                                                                                                                                                                                                                                                domain
                                                                                                                                                                                                                                                                                                                                                                           domain
                                                                                                                                                                                                                                                                                                                                                                            Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                             ۳,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
밁
                                           В
                                                                δõ
                                                                                        밁
                                                                                                            γQ
                                                                                                                                      밁
                                                                                                                                                          δÃ
                                                                                                                                                                                   밁
                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                    Ω
                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                               QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sig_peptide
                                                                                                                                                                                                          481
                                           823
                                                                                        763
                                                                                                              109
                                                                                                                                       703
                                                                                                                                                           541
                                                                                                                                                                                   643
                                                                                                                                                                                                                                 583
                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                              523
                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                            484
                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 244
TTCGGTGCTGGCACCAAGCTGGAGCTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 رم
```

g

912

CDS

```
Best Local Similarity Matches 593; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    424 ATGGAACTTCCCAGACTGACATCTGATGATTCTGCCATCTATTATTGTGCCCTGTTACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  364 AACCAGAAGTTCAAGGGCAAGGCCACAATGACTGTCGACAAATCCTCCAGCACAGCCTAT 423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         184 CAAGTTCAGCTGCAGCAGTCTGGGGGCTGAACTGGTGAGGCCTGGGGTCTCAGTGAAGATT 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagagg 120
                                                                                                                                                                  gtccctgatcgcttcacaggcagtggatctgggacagatttcactctcaccatcagcagt 660
ttcggcggggcaccaagctggaaatcaaa 747
                                                                                               gtgcaggctgsagacctggcagtttattactgcaagcaatcttattaatctaccg---acg
                                                                                                                                                                                                                                                                                                    cagaaaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctgga
                                                                                                                                                                                                                                                                                                                                                                                                         aaatccagtcágagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ctcacccagtctccatcttccctggctgtgtcagcaggagagaggtggctatgagctgc 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCTCAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGACATCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   teeteaggtggaggeggtteaggeggaggtggetetggeggtggeggateggacattgag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tactatgaatacgacggctatgctttggactactggggccaaggggaccacggtc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gccccgaactt.ccagggcaaggccactgtgactgcagacacatcctccaacacagcctac 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatat 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 caggtcaaggctgcaggagtcaggggcagaacttgtgaggtcaggggcctcagtcaatttg 60
                                                                                                                                                                                                                                                                            CAGAAACCAGGGCAACGTCCTAAACTGTTGATCTACGGGGCATCCACTAGGGAATCTGGG
                                                                                                                                                                                                                                                                                                                                                                              AAGTCCAGTCEGAGTCTGTTAAACAGTGGAAATCAAAATAACGACTTGGCCTGGTACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCCTGCAAGGGTTCTGGCTACAAATTCACTGATTATGCTACGCACTGGGTGAAACAGAGT 303
                                                                       GTGCAGGCTGAAGACCTGGCAGTTTATTACTGTCAGAATGATCATAGTTATCCGTTAACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTCACTCAGTCTCCATCCTCCCTGAGTGTGTCAGCAGGAGAGAAGGTCACTATGAGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              complement(3509. .3580)
/gene="bla"
.3712. .4284
./note="intergenic region"
.a 1104 c 1126 g 1007 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /protein_id="CAA74920.1"
//b_xref="GI:2462914"
//translation="MSIQHERMALIPFFAAFCLPVFAHPETLVKVKDAEDQLGARVGY
/translation="MSIQHERMASTEKVLLCGAVLSRIDAGQEQLGRRIHYSQNDLVE
:IELDLNSGKILESFRPEERFPMMSTEKVLLCGAVLSRIDAGQEQLGRRIHYSQNDLVE
YSPVTEKHLTGEMTVEELCSAAITMSDNTAANLLLTTIGGPKELTAFLHNMGDHVTRL
YSPVTEKHLTDAGTTTMPVAMATTLRKLLTGELLTLASRQQLIDMMEADKVAGPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LRSALPAGWETADKSGAGERGSRGIIAALGPDGKPSRIVVIYTTGSQATMDERNRQIA
EIGASLIKHW"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /product="lactamase"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      62.8%;
79.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 469.2; DB 12;
Pred. No. 9.2e-127;
); Mismatches 133;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 4354;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                              600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  300
                                                                                                                       717
                                                                          882
                                                                                                                                                                                                                                                                            762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    363
                                                                                                                                                                                                                                                                                                                                                                              702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2
```

```
SOURCE
ORGANISM
                                                                                                                                                                                         DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                            RESULT
ASY14583
                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                              Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QΥ
                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뭕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δõ
                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                            FOCUS
                     TITLE
                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local
Matches 5
                                                                                                                                                                                                                                                                                                                              779
                                                                                                                                                                                                                                                                                                                                                                719
                                                                                                                                                                                                                                                                                                                                                                                                                                 662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             308
                                                                                                                                                                                                                                                                                                                                                                                                 719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N
                                                                                                                                                                                                                                                                             w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          aatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcagc 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            actatgaatacgacggctatgctttggactactggggccaagggaccacggtcaccgtct
                                                                                                                                                                                                                                                                                                                                              tcggcgggggcaccaagctggaaatcaaa 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tccctgatcgcttcacaggcagtggatctgggacagatttcactctcaccatcagcagtg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    agaaaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatatg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           aggtcaagctgcaggagtcaggggcagaaacttgtgaggtcaggggcctcagtcaatttgt
                                                                                                                                                                                                                                                                                                                              TCGGAGGGGGACCAAGCTGGAAATCAAA
                                                                                                                                                                                                                                                                                                                                                                                                 TGGAGGCTGAGGATCTGGGAGTTTATTACTGCTTTCAAGGTTCACATCTTCCGTACACGT
                                                                                                                                                                                                                                                                                                                                                                                                                   tgcaggctgaagacctggcagtttattactgcaagcaatcttataatctaccg---acgt 718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCCAGATAGGTTCAGTGGCAGTGGATCAGGGACAGATTTCACACTCAAGATCACCAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGAGACCAGGCCAGTCTCCAAAGCTCCTGCTCCAAAGTTTCCCAACCGATTTTCTGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATCTAGTCAGAGCATTGTACA - - - TAGTAATGGAAACACCTATCTAGAATGGTACCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGACCCAAACTCCACTCTCCCTGCCTATCAGTCTTGGAGATCAAGCCTCCATCTCTTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tcacccagtctccatcttccctggctgtgtcagcaggagagaggtcgctatgagctgca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCTCAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGATGTTTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcgggacattgagc 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ----TCTACGCTTCTCCTCTGCTATGGACTACTGGGGCCAAGGGACCACGGTCACCGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGCAGCTCAGCGGCCTGACATCTGGGGACACTGCCGTCTATTTCTGTAATGCTCTAAT--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tgcacctcagcagcctgacatctgaggacacaaccgtctattactgtaatgcagtcatct 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacacagcctacc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGAACAGGGCCTGGAGTGGATTGGATGCATTGATCCTGAGAGTGGTGATGTTGAATATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCTGCACAGCTTCTGGCTTCAACATTAAAGACTTCTATATACACTGGGTGAAGCAGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagaggc 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGGTTCAGCTGCAGCAGTCTGGGGCAGAGCTTGTGAGGTCAGGGGGCCTCAGTCCAGTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       il Similarity
597; Conserv
                                                                                                                                                                                                       Artificial sequence; Y14583
                                                                                                                                     artificial sequence; fusion protein; histidine tagged fusion protein; immunoglobulin heavy chain; immunoglobulin light chain; lactamase; recombinant antibody; streptavidin; variable region.
 Bifunctional and multimeric complexes single chain antibodies (scFV)
                                                                    Plasmid synthetic construct artificial sequence.
1 (bases 1 to 4354)
                                                                                                                                                                                          Y14583.1 GI:2462912
                                                                                                                       synthetic construct.
                                      Little, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                    ., Breitling, F., Kontermann, R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         79.78;
                                                                                                                                                                                                                       mRNA circular vector pSTE-215.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No. 2.6e-127;
0; Mismatches 140;
                                                                                                                                                                                                                                                                                                                              807
                   of streptavidin
                                                    Schmidt, T.,
                                                                                                                                                                                                                                            SYN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                            04-APR-2000
                                                    Skerra, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12;
                     fused
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                     6
                                                      and
                                                                                         ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ψ
                                                                                                                                           ٠,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
MEDLINE
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
MEDLINE
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                          gene
                                                                                                                                                                                                          CDS
                                   V_region
                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                           mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RBS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              promoter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Direct Submission
Submitted (13-AUG-1997) S. Duebel, Molecular Genetics, of Heidelberg, Im Neuenheimer Feld 230, 69120 Heidelber Related sequences: Y14584, Y14585, X03591 and Y12778.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Duebel,S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Affinity enhancement of a recombinant antibody: formation of complexes with multiple valency by a single-chain Fv fragmen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kipriyanov,S.M.,
and Dubel,S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       J. Immunol.
95138549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      streptavidin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     97110906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Protein Eng. 9 (2), 203-211 (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (bases 1 to 4354)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 4354)
                                               /product="immunoglobulin heavy chain, variable domain"
/protein_id="CAA74918.1"
/db_xref="G1:4376152"
/db_xref="G0:4376152"
/translation="QVQLQQSGAELVRPGVSVKISCKGSGYKFTDYATHWVKQSHAKS
LEWIGYISTYYGDTTYNQKFKGKATMTYDKSSSTAYNELPRLTSDDSAIYYCALLRPF
AYWGQGTTVTVS"
                                                                                                                                                                                                                                                                                                                                                                                                                            /product-"scFv-215::core-streptavidin fusion protein"
/protein_id-"CAA74917.1"
/db_xref-"G::2462913"
/tanslation-"MKYLLPTAAGLLLLAAQPAMAQVOLQQSGAELVRPGVSVKISC
/translation-"MKYLLPTAAGLLLLAAQPAMAQVOLQQSGAELVRPGVSVKISC
KGSGXKFTDXATHWVKQSHAKSLEWIGVISTYYGDTYYNQKFKGKATMTVDKSSSTAY
MELPRLTSDDSAIYYCALLRPFAYWGQGTTVTVSSGGGGSGGGGGGGGGDIELTQSP
SSLSVSAGEKVTMSCKSSQSLLNSGNQNNDLAWYQQRPGQRPKLLIYGASTREGGVPD
                                                                                                                                                                                                                                                                                                                                                                                              RFTGSGSGTDFTLTISSVQAEDLAVYYCQNDHSYPLTFGAGTKLELKRAAAGSGAAEA
GITGTWYNQLGSTFIVTAGADGALTGTYESAVGNAESRYVLTGRYDSAPATDGSGTAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /gene=1
                 274. .288
/gene="CDR-H1"
                                                                                                                                                                                         <184. .>525
/gene="Vh"
                                                                                                                                                                                                                                                        /note="insert part 1"
/organism="Mus musculus"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                             /gene="sc
184. .525
                                                                                                                                                                                                                                                                                                                                                184. .1374
                                                                                                                                                                                                                                                                                                                                                              KVKPSAASGSEQKLISEEDLCIHHHHH"
                                                                                                                                                                                                                                                                                                                                                                                  GWTVAWKNNYRNAHSATTWSGQYVGGAEARINTQWLLTSGTTEANAWKSTLVGHDTFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          103.
                                                                                                                                                                                                                        /gene="Vh"
/product="Vh hypervariable domain
                                                                                                                                                       /codon_start=1
/transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /gene="scFv-215"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Streptomyces
/db_xref="taxon:1895"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="synthetic construct"
/plasmid="psTE-215"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'gene=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'gene="scFv-215"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /gene="scFv-215"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          note="PA1/04/03"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          focus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .4354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Methods 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           . 4354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      fusion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "scFv-215"
                                                                                                                                                                                                                                                                                                                             scFv-215"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        scFv-215"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Little, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (2),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kropshofer, H., Breitling, F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         201-209 (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         avidinii"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Heidelberg,
Y12778.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    fragment-core
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   University
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gotter, S.
```

Ş

721

ggcgggggcaccaagctggaaatcaaa 747

```
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT
AX001511
  Q
                                밁
                                                          δÃ
                                                                                      В
                                                                                                                Qy
                                                                                                                                               밁
                                                                                                                                                                       δÃ
                                                                                                                                                                                                      Дb
                                                                                                                                                                                                                                QΥ
                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1678
                                  542
                                                                                                                                                422
                                                                                                                                                                                                                                                                                                                                                                              182
608 atcgcttcacaggcagtggatctgggacagatttcactctcaccatcagcagtgtgcagg
                                                             548
                                                                                         482
                                                                                                                    488
                                                                                                                                                                           428
                                                                                                                                                                                                        362
                                                                                                                                                                                                                                   368
                                                                                                                                                                                                                                                             302 GTGACTACTATTATATGGACTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTCAG
                                                                                                                                                                                                                                                                                          308
                                                                                                                                                                                                                                                                                                                      242
                                                                                                                                                                                                                                                                                                                                                   248
                                                                                                                                                                                                                                                                                                                                                                                                          188
                                                                                                                                                                                                                                                                                                                                                                                                                                      122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            hes 591;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            62 AGGCTTCTGGTTACTCATTCACTGGCCACAACATGAACTGGGTGAAGCAGAGCAATGGAA 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8 agctgcaggagtcaggggcagaacttgtgaggtcaggggcctcagtcaatttgtcctgca 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N
                                                                                     GTCAAAGTGTTTTATACAGTTCAAATCAGAAGAACTAGTTGGCCTGGTACCAACAGAAAC, 541
                                                                                                                                                                                                                                                                                                                                                                                           agtotocatottocotggotgtgtoagcaggagagaggtogotatgagotgoaaatoca.487
                                                                                                                                                                                                                     gtggaggcggttcaggcggaggtggctctggcggtggcggatcggacattgagctcaccc 427
                                                                                                                                                                                                                                                                              aatacgacggctatgctttggactactggggccaagggaccacggtcaccgtctcctcag
                                                                                                                                                                                                                                                                                                                                                                              AGTTCGAGGGCAAGGCCACATTGACTGTAGACAAATCCTCCAGCACAGCCTACATGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cagcttctggcttcaacattaaagactactatatgcactgggtgaaacagaggcctgaag 127
                                               cagggcagtctcctaaagtgctgatctactgggcatccactagggaatctggagtccctg 607
                                                                                                       gtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcagcagaaac 547
                                                                                                                                                                                                        GTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGACATCGAGCTCACTC
                                                                                                                                                                                                                                                                                                                     TGGAGAGCCTGACATCCGAGGACTCTGCAGTCTATTACTGTGCAAGATTCGCCTACTATG
                                                                                                                                                                                                                                                                                                                                    tcagcagcctgacatctgaggacacaaccgtctattactgtaatgcagtcatctactatg
                                                                                                                                                                                                                                                                                                                                                                                                                                   AGAGCCTTGAGTGGATTGGAATTATTGATCCCTACTATGGTGGTACTAGCTACAACCCGA 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                       agggcctggagtggattggatatattgatcctgagagtggtgaaactgaatatgccccga 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGTGGAGGTACCAAGCTGGAAATAAAA 1704
                                                                                                                                            AGTCTCCATCATCTCTGGCTGTGTCTGCAGGAGAGAGGGTCACTATGACCTGTAAGTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGCTACAGCAGTCTGGACCTGAGCTGGAGAAGCCTGGCGCTTCAGTGAAGATATCCTGCA 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 (bases 1 to 1668)
Bosman, A. and LOTTE, K.
B7-BINDING MOLECULES FOR TREATING IMMUNE DISEASES
Patent: WO 9858965-A 30-DEC-1998;
BOSMAN ALFONS (BE); LORRE KATRIEN (BE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
AX001511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           unclassified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AX001511.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AX001511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="unidentified"
/db_xref="taxon:32644"
424 c 453 g 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .1668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GI:7241663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              from Patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          67.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1668 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 501.6; DB 13 Pred. No. 2.8e-136;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                W09858965.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches 149;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            UNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 1668;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10-MAR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
  667
                                                                                                                                                                                                                                                                                                                                                 307
                                                                                                                                                                                                                                                                                                                                                                            241
                                601
                                                                                                                                               481
                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                        367
                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                        247
                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
٠,_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
TITLE
JOURNAL
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
XXU31739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                               misc_feature
                                                                                                                                                        misc_feature
                                                                                                                                                                                                                  misc_feature
                                                                                                                                                                                                                                                                                 misc_feature
                                                                                                                                                                                                                                                                                                                                           misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                       misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        602 ATCGCTTCACAGGCAGTGGATCTGGGACAGATTTTTCTCTTACCATCAGCAGTGTACAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gcaccaagctggaaatcaaa 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGAGGACCTGGCAGTTTATTACTGTCATCAATACCTCTCCTCGTGGACGTTCGGTGGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ctgaagacctŷgcagtttattactgcaagcaatcttataatctaccgacgttcggcgggg 727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTACCAAGCTCGAGATCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           xxu31739 864 bp
Single chain antibody
U31739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (17-JUL-1995) Francesco Nardone, Istituto di parassitologia, University of Rome 'La Sapienza', Piazzale Aldo Moro 5, Roma, RM 00185, Italy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            artificial sequence.
1 (bases 1 to 864)
Nardone, F., Spano, F. and Crisanti, A.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           U31739.1 GI:975304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  synthetic construct.
                                      205
                                                                                               /note=
                                                                                                                                                                                     /note="enc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /product="SCA 13.1"
/product="SCA 13.1"
/protein_id="AAA/5173.1"
/db_xref="701:975305"
/translation="MKYLLPTAAAGLLLLAAQPAMAEYQLQQSGAELVRSGASVQLSC
/translation="MKYLLPTAAAGLLLLEAQPAMAEYQLQQSGAELVRSGASVQLSC
/translation="MKYLLPTAAAGLLLLDAQPAMAEYQLQQSGAELVRSGASVQLSC
/translation="MKYLLPTAAAGLLLLDAQPAMAEYQLQQSGAELVRSGASVQLSC
/translation="MKYLLPTAAGLLLLDAQPAMAEYQLQQSGAELVRSGASVQLSC
/translation="MKYLLPTAAGLLLTAAGLLTAGATAGLC"
/translation="MKYLLPTAAGLLTAGAGATAGLC"
/translation="MKYLLPTAAGLLTAGAGAGATAGLT"
/translation="MKYLLPTAAGLT"
/translation="MKYLLPTAAGLT"
/translation="MKYLLPTAAGLT"
/translation="MKYLLPTAAGLT"
/translation="MKYLLT"
/translation="MKYLT"
/translation="MKYLLT"
/translation="MKYLT"
/translation="MKYLT"
/translation="MKYLT"
/translation="MKYLT"
/translation="MKYLT"
/translation="MKYLT"
/translation="MKYLT"
/translation="MKYLT"
/translation="MKYL
            811. .864

/note="encodes C-myc peptide"

222 c 234 g 203 t
                                                                                                                                                            751.
                                                                                                                                                                                                                                                                                                                                                                                                       /note="encodes
427. .471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             157.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="single chain antibody derived from monoclonal
antibody against Plasmodium berghei Pbs21 antigen"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LISEEDLNGAA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="synthetic construct"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                 /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="encodes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                              /note="variable region
                                                                                                                                                                                                                                                                                                                                                                          'note="encodes linker peptide'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="variable region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              transl_table=11/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'note="Pel B leader"
                                                                                                                                                                                                                                                                                                                                                                                                                                                             e="encodes CDR 2"
                                                                                                                                                                                                                                                                                                                                                 .810
                                                                                                                            encodes CDR
                                                                                                                                                                                                                                                 encodes
                                                                                                                                                                                        encodes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SCA 13.1 gene, complete cds
                                                                                                                                                                                        CDR 2"
                                                                                                                                                                                                                                                 CDR 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                    CDR 3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDR 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      from
                                                                                                                                                                                                                                                                                                                 from light chain"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   heavy chain"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       05-SEP-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            661
```

Query Match

63.1%;

Score 471;

DB 12;

Length

```
BASE COUNT
ORIGIN
밁
             Qy
                               В
                                          Ş
                                                           В
                                                                          Qy
                                                                                           밁
                                                                                                       δÃ
                                                                                                                         밁
                                                                                                                                      δÃ
                                                                                                                                                       멍
                                                                                                                                                                  δõ
                                                                                                                                                                                      B
                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                δõ
                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Sin
Matches 625;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  V_region
                                                                                                          541
 706
                               646
                                                              586
                                                                                            526
                                                                                                                           466
                                                                                                                                        481
                                                                                                                                                         406
                                                                                                                                                                      421
                                                                                                                                                                                      346
                                                                                                                                                                                                     361
                                                                                                                                                                                                                    307
                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                 247
                                                                                                                                                                                                                                                                                187
                                                                                                                                                                                                                                                                                                               127
                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                             67
                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                           CAGAAAGAAGGGCAGCCTCCTAAATTGATTATTTATGGGGCATCCACTAGAGAGCCTTGG 585
                                                                                                                                                                ctcacccagtctccatcttccctggctgtgtcagcaggagagaggtcgctatgagctgc
                                                                                                                                                                                              tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagagg
                                                                                                                                                                                      TCCTCAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGACATTGAG
                                                                                                                                                                                                                     TAC-----
                                                                                                                                                                                                                             CTCACCCAGTCTCCATCCTCCCTGGCTGTGACAGCAGGAGAAGGTCACTATGAGATGC
                                                                                                                                                                                                                                                                                                                                                                                                         Similarity 82.7
25; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note="linker poptide"
/evidence=experimental
397. 750
/gene="LLB6scFv"
/note="light chain (kappa chain) variable region"
/evidence=experimental
751. 786
/gene="llb6scFv"
/note="Myc-tag marker peptide"
/evidence=experimental
/evidence=experimental
/evidence=experimental
/evidence=experimental
/evidence=experimental
/evidence=experimental
/evidence=experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                    -----TTTGACTACTGGGGCCAAGGGACCACGGTCACCGTC 345
                                                                                                                                                                                                                                                                                                                                                                                                               68.9%;
82.7%;
                                                                                                                                                                                                                                                                                                                                                                                                         Score 514.4; DB 11; Pred. No. 4.8e-140; 0; Mismatches 101;
                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                         30;
                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                            660
                                                                                                                                                                                      405
                                                                                                                                                                                                     420
                                                                                                                                                                                                                                   360
                                                                                                                                                                                                                                                                                246
                                                             645
                                                                                                                                                       465
                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                            99
                                                                                                                                                                                                                                                                                                                                                                                                         2;
```

RESULT AX001509

			•												
Qy 661 Db 1618	Qy 2 601 Db 1558	541 498	Qy 481 Db 1438	Qy 421 Db 1378	Qy 361 Db 1318	Qy 301 Db 1258	Qy 241 Db 1198	Oy 181 Db 1138	Qy 121 Db 1078	Oy 61 Db 1018	Qy 1 Db 958	Query Mat Best Loca Matches	SOUIC BASE COUNT ORIGIN	REFERENCE AUTHORS TITLE JOURNAL FEATURES	LOCUS DEFINITION ACCESSION VERSION KEYWORDS SOURCE ORGANISM
gtgcaggctgaagacctggcagtttattactgcaagcaatcttataatctaccgacgttc 720	gtccctgatcycttcacaggcagtggatctgggacagatttcactctcaccatcagcagt 660	cagaaaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctgga 600 	aaatccagtcágagtctgttcaacagtagaaccogaaagaattacttggcttgg	ctcacccagtctccatcttccctggctgtgtcagcaggaggagaggtcgctatgagctgc 480	tcctcaggtggaggcggttcaggcggaggtggctctggcggttggcggatcggacattgag 420	tactatgaatacgacggctatgctttggactactggggccaagggaccacggtcaccgtc 360	otgcacotcagcagoctgacatotgaggacacaaccgtotattactgtaatgcagtcatc 300	gococgaacttocagggcaaggccactgtgactgcagacacatcotocaacacaggctac 240 	cctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatat 180 	tootgoacagottotggottoaacattaaagactactatatgcactgggtgaaacagagg 120 	caggicaagcigcaggagicaggggcagaactigigaggicaaggggccicagicaattig 60	atch 68.3%; Score 510.2; DB 13; Length 1725; cal Similarity 80.2%; Pred. No. 8.4e-139; S99; Conservative 0; Mismatches 148; Indels 0; Gaps	0	unclass (bas Bosman, B7-BINI Patent: BOSMAN	
												_		•	

```
ACCESSION
VERSION-
KEYWORDS
             δÃ
                                                                      멍
                                                                                        Q
                                                                                                                              δõ
                                                                                                                                                     밁
                                                                                                                                                                                             В
                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                망
                                                 QΥ
                                                                                                             В
                                                                                                                                                                        δõ
                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                             ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
A83217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       . 말
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멅
                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 630
                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                           source
             421
                                                   361
                                                                        358
                                                                                           301
                                                                                                               298
                                                                                                                                  241
                                                                                                                                                                          181
                                                                                                                                                                                              178
                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                     118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         721
                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                           58
                                                                                                                                                                                                                                                                                      gtccctgatcgcttcacaggcagtggatctgggacagatttcactctcaccatcagcagt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ctcacccagtctccatcttccctggctgtgtcagcaggagagaaggtcgctatgagctgc
                               tcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggacattgag
                                                                                 tactatgaatacgacggctatgctttggactactggggccaagggaccacggtcaccgtc
                                                                                                                         cctgaagagggcctggagtggattgggatatattgatcctgagagtggtgaaactgaatat 180
                                                                                                                                                                                                                                                    tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagagg 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ggcgggggcaccaagctggaaatcaaa 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gtgcaggctgaagacctggcagtttattactgcaagcaatcttataatctaccgacgttc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTCCCTGATCGCTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGT
                                                                       GCCTATGGTTACGACG ---ATGCTATGGACTACTGGGGCCAAGGGACCACGGTCACCGTC
                                                                                                              AATGAGAAGTTCAAGAACAAGGCCACACTGACTGTAGACAAATCCTCCACCACAGCCTAC
                                                                                                                                                                 CCTGGACAAGGCCTTGAGTGGATTGGAGAGGTTAATCCTAGTACCGGTCGTTCTGACTAC
                                                                                                                                                                                                                                     TCCTGCAAGGCTTCTGGCTACACCTTCACCGGCTACTGGATACACTGGGTGAAGCAGAGG
                                                                                                                                                                                                                                                                          CAGGTCCAACTGCAGCCTGGGGGCTGAACTGGTGAAGCCTGGGGGCTTCAGTGCAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGTGGAGGCACCAAGCTCGAGATCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTGCAGGCTGAAGACCTGGCAATTTATTACTGCAAGCAATCTTATACTCTTCGGACGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A83217
Sequence
A83217
                                                                                                                                                                                                                                                                                                                                                                                                                 1 (bases 1 to 2025)
Emery,S.C. and Blakey,D.C.
CHEMICAL COMPOUNDS
Patent: WO 9851787-A 19-NOV-1998;
EMERY STEPHEN CHARLES (GB); ZENECA
LOCATION/QUALIFIERS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          unidentified unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               unclassified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A83217.1
                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                               440
                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            37 from Patent
                                                                                                                                                                                                                                                                                                                                                                             /organism="unidentified"
/db_xref="taxon:32644"
604 c 638 g 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GI:6732659
                                                                                                                                                                                                                                                                                                                            73.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2025
                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                            Score 548.6; DB 81; Pred. No. 4.5e-150;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA
W09851787.
                                                                                                                                                                                                                                                                                                                   Mismatches 114;
                                                                                                                                                                                                                                                                                                                                                                                                                              LTD
                                                                                                                                                                                                                                                                                                                                                                                                                              (GB)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PAT
                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                      Length 2025;
                                                                                                                                                                                                                                                                                                                   Ψ
                                                                                                                                                                                                                                                                                                                   Gaps
                                               4,20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  720
             480
                                474
                                                                       414
                                                                                         360
                                                                                                                                                                          240
                                                                                                                                                                                             237
                                                                                                                                                                                                                                     177
                                                                                                                                                                                                                                                                            117
                                                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              654
                                                                                                             357
                                                                                                                                  300
                                                                                                                                                      297
                                                                                                                                                                                                                                                                                                                   1.
                                                                                                                                                                                                                                                        JOURNAL FEATURES
                                                                                                                                                                                                                                                                                                                                                                             REFERENÇE
AUTHORS
                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MMU131195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCUS
                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                gene
                                                                                                                                                      CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481
```

```
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
misc_feature
                                                                                                                                                                                                                                                                                                                                                                 V_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   475 CTCTCACAGTCTCCATCCTCCCTGGCTGTGTCAGCAGGAGAAGGTCACCATGAGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     595 CAGAGACCAGGCAGTCTCCTAAACTGCTGATCTATTGGGCATCCACTAGGACATCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ggcggggcaccaagctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gtgcaggctgaagacctggcagtttattactgcaagcaatcttataatctaccgacgttc 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gtccctgatcgcttcaccaggcagtggatctgggaccagatttcactctcaccatcagcagt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cagaaaccagygcagtctcctaaaagtgctgatctactgggcatccactagggaatctgga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGTGGAGGCACCAAGCTCGAGATCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTGCAGGCTGAAGACCTGGCAATTTATTACTGCAAGCAATCTTATACTCTTCGGACGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTCCCTGATCGCTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGT 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Direct Submission
Submitted (01-DEC-1998)
CNRS EP118, Faculte des
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Vertebrata; Rodentia; Sciurognathi; Muridae; Murinae; 1 (bases 1 to 786)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AJ131195
AJ131195:1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MMU131195 786
Mus musculus mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             single chain immunoglobulin variable nuclear-encoded subunits VIac of mamm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Molecular cloning, expression and characterization of a single chain immunoglobulin variable fragment (scFv) to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bremaud, L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ratinaud, M.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   house mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1LB6scFv gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MMU131195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 786)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FRANCE
                                   /evidence=experimental
/product="single chain antibody scFv"
/protein_id="chain318.1"
/db_xref="GI:413827"
/translation="MAOVKLOOSGABLVKPGASVRLSCTASGENIKDTYIHWVKORPE
GCLEMIGRINPANGITTYDFKFGGKATITADTSSNTAYLQLSSLTSEDTAVYFCTRVP
YFDYWGGGTTYTVTVSGGGGGGGGGGGGSDIELTQSPSSLAVTAGEKVTMRCKSSQS
LLWSVNQKNYLSWYQQKEGQPFKLIIYGASIREPWVPDRFTGSGSGTDFTLTINNVHV
ADLAVYYCQHNHGSFLPYTFGGGTKLEIKRAAAEQKLISEEDLN" 352. .396
                                                                                                                                                                                                                      /function="specifically oxidase subunits VIac"
                                                                                                                                                                                                                                                                                                                                                                                                                          /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                         /gene="1LB6scFv"
/note="heavy cha
                                                                                                                                                                                                                                                                                                                                                                                    'gene="1LB6scFv"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ocation/Qualifiers
                                                                                                                                                                                                                                                              'gene="1LB6scFv"
                                                                                                                                                                                                                                                                                                      ′evidence≖experimental
                                                                                                                                                                                                   codon_start=]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GI:4138226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pelissier, P., Teillaud, J.L., Kadenbach, B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      antibody;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               bp mRNA
for single
                                                                                                                                                                                                                                                                                                                       chain variable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bremaud L., Institut de Biotechnologie, Sciences 123 Av. A. Thomas, 87060 Limoges
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scrv;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ROD
chain antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    single chain
                                                                                                                                                                                                                                             binds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mammalian cytochrome c
                                                                                                                                                                                                                                                                                                                         region"
                                                                                                                                                                                                                                             င
                                                                                                                                                                                                                                             mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mammalia;
Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SCFV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      07-JAN-1999
                                                                                                                                                                                                                                           cytochrome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cogne, M. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     functional
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           540
```

```
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
TITLE
                                                        δÃ
                                                                                                                                                                                                                    ρy
                                                                                                                                                                                                                                                            δÃ
 멍
                QΥ
                                      뮍
                                                                              В
                                                                                              Qy
                                                                                                                      밁
                                                                                                                                 . Qy
                                                                                                                                                              ₽
                                                                                                                                                                           Qy
                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                 용
                                                                                                                                                                                                                                                                                                                                                                                  ğ
                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                       484
                                                                                                  481
                                                                                                                                          421
                                                                                                                                                               424
                                                                                                                                                                                 361
                                                                                                                                                                                                    367
                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                            307
                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                           187
                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                   127
                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity 84.1
les 630; Conservative
                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                        67
CAGGTCCAACTGCAGCCTGGGGCTGAACTGGTGAAGCCTGGGGCTTCAGTGCAGCTG 126
                                                                                                                                                                                                                                                                                                                                                                                                                   caggtcaagctgcaggagtcaggggcagaacttgtgaggtcaggggcctcagtcaatttg
                                                                               AAATCCAGTCAGAGTCTCCTCAACAGTAGAACCCGAAAGAACTACTTGGCTTGGTACCAG
                                                                                       aaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag
                                                                                                                                                              TCCTCAGGTGGCGGTGGCTCGGGCGGTGGTGGTGGCGGCGGATCTGACATTGAG
                                                                                                                                                                        tcctcaggtggaggcggttcaggcggaggtggctctggcggttggcggatcggacattgag
                                                                                                                                                                                                               tactatgaatacgacggctatgctttggactactggggccaagggaccacggtcaccgtc
                                                                                                                                                                                                                                           AATGAGAAGTTCAAGAACAAGGCCACACTGACTGTAGACAAATCCTCCACCACAGCCTAC
                                                                                                                                                                                                                                                                                             gccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacacacagcctac
                                                                                                                                                                                                                                                                                                                           CCTGGACAAGGCCTTGAGTGGATTGGAGAGGTTAATCCTAGTACCGGTCGTTCTGACTAC
                                                                                                                                                                                                                                                                                                                                     TCCTGCAAGGCTTCTGGCTACACCTTCACCGGCTACTGGATACACTGGGTGAAGCAGAGG
                                                                                                                                                                                                                                                                                                                                                                           tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagagg 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
A83227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Patent: WO 9851787-A 19-NOV-1998; EMERY STEPHEN CHARLES (GB); ZENEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CHEMICAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 (bases 1 to 864)
Emery, S.C. and Blakey, D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A83227.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            unclassified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STEPHEN CHARLES (GB); ZENECA Location/Qualifiers
1. .864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPOUNDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="unidentified"
/db_xref="taxon:32644"
234 c 232 g 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GI:6732667
                                                                                                                                                                                                                                                                                                                                                                                                                                                       73.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       from Patent
                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 548.6; D
Pred. No. 4.5e-
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO9851787.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          184
                                                                                                                                                                                                                                                                                                                                                                                                                                              4.5e-150;
hes 114;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 81;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (GB)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                               Ψ
                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                          600
                                                                                                                    543
                                                                                                                                           480
                                                                                                                                                                                 420
                                       663
                                                                               603
                                                                                                  540
                                                                                                                                                                                                    423
                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                    306
                                                                                                                                                                                                                                                                                                                          246
                                                                                                                                                                                                                                                                                                                                                                                                                            60
                                                                                                                                                               483
                                                                                                                                                                                                                                           366
                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                ۲.
```

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                     밁
                                                                                                                       Ωy
                                                                                                                                            밁
                                                                                                                                                                                   밁
                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                               ŽQ
                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                             Qγ
                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT
A83211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                     535
                                         481
                                                                                 421
                                                                                                     415
                                                                                                                     361
                                                                                                                                            358
                                                                                                                                                                 301
                                                                                                                                                                                     298
                                                                                                                                                                                                        241
                                                                                                                                                                                                                            238
                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                     178
                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                             118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      721
                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                    58
                                                                                                                                                                                                                                                                                                                                                                   بر -
                              aaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag
                                                            tcctcaggtggaggcggttcaggcggaggtggctctggcggttggcggatcggacattgag 420
                                                                                                                                                       tactatgaatacgacggctatgctttggactactggggccaagggaccacggtcaccgtc
                                                                                                                                                                                                 CAGGTCCAACTGCAGCAGCAGCTGGAACTGGTGAAGCCTGGGGCCTTCAGTGCAGCTG 117
                                                                                                                                                                                                                                                                                                                                                               caggtcaagctgcaggagtcaggggcagaacttgtgaggtcaggggcctcagtcaatttg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacacagcctac
                                                                                                                                                                                                                                                                               cctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatat 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ggcgggggcaccaagctggaaatcaaa 747
cagaaaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctgga
                                                                                                    GCCTATGGTTACGACG----ATGCTATGGACTACTGGGGCCCAAGGGACCACGGTCACCGTC
                                                                                                                                                                                                                            AATGAGAAGT TCAAGAACAAGGCCACACTGACTGTAGACAAATCCTCCACCACAGCCTAC
                                                                                                                                                                                                                                                                    CCTGGACAAG3CCTTGAGTGGATTGGAGAGGTTAATCCTAGTACCGGTCGTTCTGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     I (bases 1 to 2019)

Emery, S.C. and Blakey, D.C.

CHEMICAL COMPOUNDS

Patent: WO 9851787-A 19-NOV-1998;

EMERY STEPHEN CHARLES (GB); ZENECA

LOCALION/Qualifiers

2019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGTGGAGGCAÇCAAGCTCGAGATCAAA 810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A83211 Sequence A83211
                                                                                                                                                                                                                                                                                                                                                                                           h 73.4%;
Similarity 84.3%;
30; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A83211.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         437
                                                                                                                                                                                                                                                                                                                                                                                                                                                        þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="unidentified"
/db_xref="taxon:32644"
604 c 637 g 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GI:6732654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2019
from 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Patent
                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                           Score 548.6; DB 81
Pred. No. 4.5e-150;
0; Mismatches 114;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA
: WO9851787.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZENECA
                                                                                                                                                                                                                                                                                                                                                                                                                DB 81;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GIT
                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21-JAN-2000
                                                                                                                                                                                                                                                                                                                                                                                            ų.
                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                        540
  600
                                                                                  480
                                                             534
                                                                                                                                                                 360
                                                                                                                                                                                    357
                                                                                                                                                                                                                                                                     237
                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                              414
                                                                                                                                                                                                         300
                                                                                                                                                                                                                             297
                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                720
                                                                                                                                                                                                                                                                                                                                                                                             ۳.
```

```
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 1
ACO131533
                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                       SOURCE
                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                           MEDLINE
                                                                                                                                                                                                                                                   JOURNAI
                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           444443333333222222
4444433333332222222
44432103354331
  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          428.6
427.2
427.2
426.4
426.4
424.4
411.2
409.6
400.6
400.6
400.6
400.6
400.6
397.4
397.4
395.8
                                                                                                                                                                                      Direct Submission
Submitted (16-DEC-1998) de Fromentel C., U 380 INSERM, Institut
Cochin de Genetique Moleculaire, 22 rue Mechain PARIS, 75014,
                                                                                                                                                                                                                                                                   Caron de Fromentel,C., Gruel,N., Venot,C., Debussche,L., Conseiller,E., Dureuil,C., Teillaud,J.L., Tocque,B. and Bracco,L. Restoration of transcriptional activity of p53 mutants in human record cells by intracellular expression of anti-p53 single chain
                                                                                                                                                                                                                                                                                                                                                 antibody; immunoglobulin
                                                                                                                                                                                                                                                                                                                                                         containing linker sequ
AJ131533
AJ131533.1 GI:4033867
                                                                                                                                                                                                                                                             F۷
                                                                                                                                                                                                                                                                                                                             synthetic construct.
                                                                                                                                                                                                                                                                                                                                                                                     ACO131533 747 bp
Synthetic construct for
                                                                                                                                                                                                                                                   Oncogene 18 (2),
                                                                                                                                                                                                                                                                                                            artificial sequence.
1 (bases 1 to 747)
                                                                                                                                                                                                                       Fromentel,C
                                                                                                                                                                                                                                                             fragments
                                                                                                                                                                                                                                (bases 1 to 747)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          44408888087080888688444
/product-"anti-p53 ScFv antibody (scFv11D3)"
/protein_id-"CAA10386.1"
/db_xref-"G1.4033861"
/db_xref-"G1.4033868"
/translation-"QvKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEG
LEWIGYIDPESGETEYAPNFQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYY
gYDGYALDYWGOGTTVTYSSGGGGSGGGGSGGGGSDIELTQSPSSLAVSAGEKVAMSC
KSSQSLFNSFTRKNYLAWYQQKPGQSPKYLIYWASTRESGVPDRFTGSGSGTDFTLTI
SSYQAEDLAVYYCKQSYNLPTFGGGTKLEIK"
1 747
                                                                                                                                /organism="synthetic c./db_xref="taxon:32630"
/cell_type="hybridoma"
                                                                                                                                                                        Location/Qualifiers
                                                                                     transl_table=11
                                                                                             /codon_start=1
                                                                                                        /note="synthetic"
                                                                                                                          'focus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          747
                                                                                                                                                                                                                                                    551-557
                                                                                                                                                                                                                                                                                                                                                                             sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                81
11
12
12
81
81
81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A76868
AX018532
AX018608
AX002780
AX002779
AX002778
AX002778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MMSCFVP25
ASY14585
SCFV18290
ASY14584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AR088013
A66021
ASY12778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AF002242
AF226875
A62074
A66044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MMVHVKFG
AX001527
                                                                                                                                                                                                                                                                                                                                                                                     mRNA
anti-p53
                                                                                                                                                                                                                                                                                                                                                                                                                                               ALIGNMENTS
                                                                                                                                                                                                                                                    (1999)
                                                                                                                                                                                                                                                                                                                                                 superfamily;
                                                                                                                                                      construct"
                                                                                                                                                                                                                                                                                                                                                                                      ScFv
                                                                                                                                                                                                                                                                                                                                                                                      SYN
antibody
                                                                                                                                                                                                                                                                                                                                                 ScFv;
                                                                                                                                                                                                                                                                                                                                                 variable region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Y14585 Artificial
Y18290 Expression
Y14584 Artificial
A76868 Sequence 6
AX018532 Sequence
AX018503 Sequence
AX02780 Sequence
AX002780 Sequence
AX002778 Sequence
AX00278 Sequence
AX00278 Sequence
AX00278 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A83223 Sequence 43
A83230 Sequence 50
AF002242 Mus muscu
AF226875 Synthetic
A62074 Sequence 9
A66044 Sequence 26
AR088013 Sequence 3
Y12778 Artificial
Z29480 M.musculus
AX001527 Sequence
                                                                                                                                                                                                                                                                                                                                                                                     16-MAR-2000 (SCFv11D3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AX001527 :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     U20617 Mus muscul
Z70662 Artificial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic
                                                                                                                                                                                                                                                                                                                           Qy
                                                      γ
                                                                                                                                                                       δÃ
                                                                                                                                                                                           뫄
                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                      В
                ğ
                                     멍
                                                                            밁
                                                                                           δÃ
                                                                                                                 В
                                                                                                                                  Q
                                                                                                                                                       밁
                                                                                                                                                                                                                                                                      ğ
                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                          δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                    721
                                                                             601
                                                                                              601
                                                                                                                 541
                                                                                                                                                       481
                                                                                                                                                                          481
                                                                                                                                                                                     421
                                                                                                                                                                                                              421
                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity nes 747; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ш
                                                                                                                                                     CTGCACCTCAGCAGCCTGACATCTGAGGACACAACCGTCTATTACTGTAATGCAGTCATC
                                                                                                                                                                                                                                                                                                                       ctgcacctcagcagcctgacatctgaggacacaaccgtctattactgtaatgcagtcatc
                                                                                                                                                                                                                                                                                                                                                  GCCCCGAACTTCCAGGGCAAGGCCACTGTGACTGCAGACACCCTCCAACACACCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                      tectgeaeagettetggetteaaeattaaagaetaetatatgeaetgggtgaaaeagagg
  GGCGGGGCACCAAGCTGGAAATCAAA
           ggcgggggcaccaagctggaaatcaaa
                                      GTGCAGGCTGAAGACCTGGCAGTTTATTACTGCAAGCAATCTTATAATCTACCGACGTTC
                                                 gtgcaggctgaagacctggcagtttattactgcaagcaatcttataatctaccgacgttc
                                                                             GTCCCTGATCCCTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGT
                                                                                       | gtccctgatcgcttcacaggcagtggatctgggacagatttcactctcaccatcagcagt
                                                                                                                                                                                            CTCACCCAGTCTCCATCTTCCCTGGCTGTGTCAGCAGGAGAGAAGGTCGCTATGAGCTGC
                                                                                                                                                                                                     ctcacccagtctccatcttccctggctgtgtcagcaggagaggaggtcgctatgagctgc
                                                                                                                                                                                                                                 TCCTCAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGACATTGAG
                                                                                                                                                                                                                                                                       TACTATGAATACGACGGCTATGCTTTGGACTACTGGGGCCAAGGGACCACGGTCACCGTC
                                                                                                                                                                                                                                                                                tactatgaatacgacggctatgctttggactactggggccaagggaccacggtcaccgtc
                                                                                                                                                                                                                                                                                                                                                            gccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacacaccatac
                                                                                                                                                                                                                                                                                                                                                                                                                            189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Mus musculus"
/db_xref="taxon:10090"
123. 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Mus musculus"
/db_xref="taxon:10090"
188 c 205 g 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /product="immunoglobulin
138. .249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Mus musculus"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /product="immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'note="
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     inker sequence"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 747; DB 12;
Pred. No. 2.7e-208;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ·Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    light
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     heavy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    chain variable region"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     chain variable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     region"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                        720
                                                          720
                                                                             660
                                                                                                                  600
                                                                                                                                    600
                                                                                                                                                                       540
                                                                                                                                                                                             480
                                                                                                                                                                                                              480
                                                                                                                                                                                                                                                    420
                                                                                                                                                                                                                                                                       360
                                                                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
```

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1118133 seqs, 2558875100 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-297-181-3
747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 February 17, 2001, 22:57:49; Search time 1856.43 Seconds (without alignments) 2059.307 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           caggtcaagctgcaggagtc.....gcaccaagctggaaatcaaa 747
                                                                                                                                                                                                                                                                                                                                 gb_pr2:*
gb_pr3:*
gb_ro:*
gb_un:*
                                                                   gb_ba3:*
gb_in1:*
gb_in2:*
                                                                                                                            em_ro:*
em_sts:*
em_sy:*
em_un:*
                                                                                                                                                                                     em_pat:*
em_ph:*
em_pl:*
                                                                                                                                                                                                                                              em_om:*
em_or:*
                            gb_pl3:*
gb_pr4:*
                                                                                                                                                                                                                                                                                        em_hum1:*
em_hum2:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3b_om:*
                                                                                                                                                                                                                                  em_ov:*
em_ba2:*
                                                                                                                                                                                                                                                                            em_in:*
                                                                                                                                                                                                                                                                                                                     em_fun:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2236266
```

2: 95 3: 95 3: 95 5: 95	65: gb_htgl3:* 66: gb_htgl3:* 67: gb_htgl3:* 68: gb_htgl5:* 69: gb_htgl5:* 70: gb_htgl6:* 71: gb_htgl8:* 72: gb_htgl9:* 73: gb_htgl9:* 74: gb_htg20:* 75: gb_htg20:* 76: gb_htg23:* 77: gb_htg23:*	5: gb_htg 6: gb_htg 7: gb_htg 7: gb_htg 0: gb_htg 0: gb_htg 1: gb_htg 2: gb_htg 3: gb_htg	4: em_ht 5: em_ht 6: em_ht 7: em_hu 8: em_hu 9: em_hu 0: em_hu 1: gb_pr 2: gb_pr

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

## Result ŏ 5148.6 5148.6 5110.6 510.6 510.6 510.6 510.6 510.6 510.6 510.6 510.6 510.6 510. Score 100.0 Match Query Length DB 744 749 1611 729 768 744 723 1314 810 1679 Ħ MMU131195 AX001509 AX001511 XXU31739 ASY14583 AXX03772 A68604 A45006 AR054409 A57272 AX003782 AF169027 AX003780 A59386 AX001519 AC0131533 A83227 Sequence 47 A83211 Sequence 31 A83217 Sequence 31 A83217 Sequence 37 AJ131195 Mus muscu AX001510 Sequence AX001511 Sequence AX003739 Single chat Y1458 Artificial AX003772 Sequence AX003780 Sequence AX003780 Sequence 31 AJ131532 Synthetic A57272 Sequence 31 AJ131532 Synthetic A57272 Sequence 4 AX003782 Sequence AF169027 Synthetic A68604 Sequence 1 A45006 Sequence 1 A45006 Sequence 1 AR054409 Sequence Description AR054409 Sequence AX001519 Sequence AJ131533 Synthetic

14

ï

```
Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                 Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Post-processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9n.:
                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                        883
877
                                                                                                                                          813.5
811.5
811.5
808.5
803.5
803.5
803.5
803.5
803.5
                                                                                                                                                                                                                                                              877
842.5
831.5
823.5
                                                                                                                                                                                                                                                                                                                                                 Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           seq
           799
796
790
790
787
787
787
785
785
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Issued_Patents_AA:*
1: /cgn2_6/ptodata/2,
2: /cgn2_6/ptodata/2,
3: /cgn2_6/ptodata/2,
4: /cgn2_6/ptodata/2,
5: /cgn2_6/ptodata/2,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length: 0
                                                                                                                                                                                                                                                                                                                                                 Query
Match
Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-297-181-4
1315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       174772 seqs, 17957048 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       February 12, 2001, 15:23:45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QVKLQESGAELVRSGASVNL.....YCKQSYNLPTFGGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                        /cgn2_6/ptodata/2/iaa/5A_COMB.pep:*
/cgn2_6/ptodata/2/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/2/iaa/ECTUS_COMB.pep:*
/cgn2_6/ptodata/2/iaa/backfiles1.pep:*
                                                                                                                                                                                                                                                                                                                                                 Length DB
Gapext 0.5
                               US-08-652-507-2
US-08-860-174A-10
US-08-8601-052-18
US-08-797-689-18
US-08-553-497A-20
US-08-553-497A-24
US-08-553-497A-24
US-08-553-497A-22
US-09-166-093-19
US-09-166-750-19
US-09-166-750-19
US-09-166-093-19
US-09-166-093-19
US-09-182-38A-19
US-08-403-833-18
US-08-403-833-18
US-08-263-911-7
US-08-263-911-9
US-08-263-911-9
US-08-403-853-18
US-08-263-911-9
                                                                                                                                                                                                                                                                                                                                                                                       SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (without alignments)
212.818 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Search time 21.01 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 174772
                                                                                                                                                               Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                       Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                               Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                 Description
          Sequence
Sequence
                                3, Appli
8, Appli
8, Appli
                                                                 16, Appl
18, Appl
7, Appl
9, Appl
8, Appl
11, Appl
                                                                                                                                       2, Appl.
10, Appl.
116, Appl.
118, Appl.
118, Appl.
20, Appl.
21, Appl.
21, Appl.
22, Appl.
23, Appl.
24, Appl.
25, Appl.
26, Appl.
27, Appl.
28, Appl.
29, Appl.
```

30 779 59.2 241 1 US-08-235-838-11 31 779 59.2 241 2 US-08-235-838-14 32 777 59.1 637 1 US-08-235-838-7 34 777 59.1 711 1 US-08-235-838-7 35 777 59.1 711 1 US-08-235-838-7 36 772 58.7 241 1 US-08-235-838-7 37 79.1 59.1 711 2 US-08-465-4738-7 38 766.5 58.3 240 1 US-08-48-1138-148 40 766.5 58.3 240 1 US-08-477-448-1148 41 766.5 58.3 240 2 US-08-47-64-81-148 42 766.5 58.3 240 3 US-08-39-765-148 43 776.5 58.3 240 3 US-08-64-360-148 44 776.5 58.3 240 3 US-08-64-360-148 45 776.5 58.3 240 3 US-08-64-360-148 47 776.5 58.3 240 3 US-08-331-398-34 48 776.5 58.3 240 3 US-08-331-398-34 49 776.5 58.3 240 3 US-08-331-398-34	779 59.2 241 1 US-08-245 779 59.2 241 2 US-08-245 777 59.1 637 1 US-08-245 777 59.1 637 2 US-08-465 777 59.1 711 1 US-08-245 777 59.1 711 1 US-08-245 777 59.1 711 2 US-08-465 772 58.7 241 1 US-08-465 772 58.7 241 1 US-08-465 766.5 58.3 240 1 US-08-646 766.5 58.3 240 2 US-08-646 766.5 58.3 240 3 US-08-646 766.5 58.3 240 3 US-08-646 766.5 58.3 240 3 US-08-31 747.5 56.8 248 1 US-08-331 747.5 56.8 248 2 US-08-331
59.2 241 1 US-08-255 59.2 241 2 US-08-465 59.1 637 1 US-08-255 59.1 711 1 US-08-255 59.1 711 1 US-08-265 59.1 711 2 US-08-465 58.7 241 2 US-08-485 58.7 241 2 US-08-488 58.3 240 1 US-08-47 58.3 240 2 US-08-646 58.3 240 3 US-08-83 58.3 240 3 US-08-83	59.2 241 1 US-08-235-838-1 Sequence 59.2 241 2 US-08-235-838-1 Sequence 59.1 637 1 US-08-235-838-1 Sequence 59.1 637 2 US-08-2465-473B-1 Sequence 59.1 711 1 US-08-235-838-7 Sequence 59.1 711 1 US-08-235-838-7 Sequence 58.7 241 2 US-08-465-473B-7 Sequence 58.7 241 2 US-08-235-838-5 Sequence 58.7 241 2 US-08-235-838-5 Sequence 58.3 240 1 US-08-248-113B-148 Sequence 58.3 240 1 US-08-477-484B-148 Sequence 58.3 240 2 US-08-646-360-148 Sequence 58.3 240 3 US-08-31-398-148 Sequence 58.3 240 3 US-08-31-398-148 Sequence 58.3 240 3 US-08-331-398-34 Sequence 57.5 248 1 US-08-331-398-34 Sequence 58.6 248 2 US-08-331-397B-34 Sequence
241 1 US-08-235 637 1 US-08-465 637 1 US-08-465 711 2 US-08-465 711 2 US-08-465 711 2 US-08-465 711 2 US-08-465 711 2 US-08-465 741 1 US-08-465 740 1 US-08-468 740 2 US-08-646 740 3 US-08-91 740 3 US-08-91 740 3 US-08-91 740 3 US-08-91 740 3 US-08-33 740 3 US-08-33	241 1 US-08-235-838-11 Sequence 241 2 US-08-465-473B-11 Sequence 241 2 US-08-235-838-11 Sequence 241 2 US-08-235-838-1 Sequence 241 1 US-08-235-838-7 Sequence 241 1 US-08-235-838-7 Sequence 241 1 US-08-235-838-7 Sequence 241 1 US-08-465-473B-7 Sequence 241 2 US-08-465-473B-5 Sequence 240 1 US-08-465-473B-5 Sequence 240 1 US-08-465-473B-148 Sequence 240 2 US-08-465-473B-148 Sequence 240 3 US-08-365-148 Sequence 240 3 US-08-365-148 Sequence 240 3 US-08-331-398-34 Sequence 248 1 US-08-331-398N-34 Sequence 248 2 US-08-331-397B-34 Sequence
1 US-08-235 1 US-08-235 1 US-08-235 2 US-08-465 1 US-08-25 2 US-08-465 1 US-08-25 1 US-08-465 1 US-08-465 1 US-08-646 3 US-08-63 3 US-08-331 1 US-08-333	1 US-08-235-838-11 Sequence 2 US-08-235-838-11 Sequence 2 US-08-235-838-14 Sequence 2 US-08-235-838-7 Sequence 2 US-08-245-473B-14 Sequence 2 US-08-235-838-7 Sequence 2 US-08-245-473B-7 Sequence 2 US-08-245-473B-5 Sequence 2 US-08-245-473B-5 Sequence 2 US-08-245-473B-5 Sequence 2 US-08-245-473B-148 Sequence 2 US-08-365-148 Sequence 2 US-08-364-360-148 Sequence 3 US-08-364-360-148 Sequence 3 US-08-364-364-164A-2 Sequence 1 US-08-331-398A-34 Sequence 1 US-08-331-397B-34 Sequence
US-08-235 US-08-235 US-08-235 US-08-235 US-08-235 US-08-235 US-08-465 US-08-485 US-08-485 US-08-485 US-08-331 US-08-331 US-08-331	US-08-235-838-11 US-08-235-838-11 US-08-235-838-14 US-08-235-838-14 US-08-465-473B-14 US-08-465-473B-14 US-08-465-473B-7 US-08-465-473B-7 US-08-465-473B-7 US-08-465-473B-5 US-08-465-473B-5 US-08-488-113B-148 US-08-488-113B-148 US-08-488-1148 US-08-488-148 US-08-488-148 US-08-488-148 US-08-488-148 US-08-488-148 US-08-488-148 US-08-331-3988-34 US-08-331-3988-34 US-08-331-3988-34 US-08-331-3988-34 US-08-331-3988-34 US-08-331-3988-34 US-08-331-3988-34 US-08-331-3988-34 US-08-331-3988-34
-08-235 -08-235 -08-465 -08-235 -08-235 -08-465 -08-465 -08-465 -08-465 -08-465 -08-465 -08-465 -09-168 -09-168 -3333	-08-235-838-11 Sequence -08-235-838-11 Sequence -08-235-838-14 Sequence -08-235-838-14 Sequence -08-235-838-7 Sequence -08-235-838-7 Sequence -08-235-838-7 Sequence -08-465-473B-7 Sequence -08-465-473B-5 Sequence -08-488-113B-148 Sequence -08-48-113B-148 Sequence -08-465-408-148 Sequence -08-646-360-148 Sequence -08-646-360-148 Sequence -08-331-398-148 Sequence -08-331-398-34 Sequence

## ALIGNMENTS

```
TYPE: amino acid
; TOPOLOGY: :linear
; MOLECULE TYPE: protein
US-08-652-507-2
                  Š
                                                 밁
                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-652-507-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 2, Application Patent No. 5876691 GENERAL INFORMATION:
                                                                                                             Matches
                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                  INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                  REGISTRATION NUMBER: 25,327
REFERENCE/DOCKET NUMBER: 11
TELECOMMUNICATION INFORMATION:
TELEPHONE: 703-816-4000
                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/08/652,507
FILING DATE: 02-Jul-1996
CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
NAME: Arthur R. Crawford
                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC.DOS/MS-DOS
SOFTWARE: Patentin Rclease #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION:
                                                                                                                                                                                                                                      LENGTH:
TYPE: a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STATE: V
COUNTRY:
ZIP: 222
                                                                                                                                                                                                                                                                                       TELEPHONE: 703-816-4100
61 APNFQGKATVIADTSSNTAYLHLSSLTSEDTTYYYCNAVIYYEYDG-----YALDYWGQG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET: 1100 No. CITY: Arlington
                                                 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
                                                                 QVKLQESGAE_VRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY
                                                 QVKLQQSGAELVRSGTSVKLSCTASGFNIKDSYMHWLRQGPEQGLEWIGWIDPENGDTEY 86
                                                                                                            171;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22201-4714
                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Virginia
Y: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     E: Nixon & Vanderhye, P.C.
1100 No. 5876691th Glebe Road, 8th Floor
                                                                                                                                                                                                                                                   270 amino acids
                                                                                                            Conservative
                                                                                                                            67.1%;
67.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US/08652507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ANTIBODY AGAINST CARCINOEMBRYONIC ANTIGEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ω
                                                                                                                                                                                                                                                                                      2
                                                                                                            28;
                                                                                                          Score 883; DB
Pred. No. 7.6e
28; Mismatches
                                                                                                            DB 2; I
1.6e-67;
nes 36;
                                                                                                                                         Length 270;
                                                                                                            Indels
                                                                                                            20;
                                                                                                            Gaps
                                                                                60
```

4

```
В
                                                                                                                 8
                                                                                                                                                    밁
                   밁
                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                        US-08-860-174A-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-860-174A-10
                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 170; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 10,
                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: August 14
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 282 amino acid:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: DAVIS, Faul Dames
APPLICANT: VAN DER LOGT, Cornelis Paul Erik
APPLICANT: VERHOEIJEN, Martine Elisa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: WILSON, Steve TITLE OF INVENTION: A BITTITLE OF INVENTION: ANTIT
                                                                                                                                                                                                                                                                                                                        MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES: 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET: PILLSBURY, MADISON & SUTRO LLP STREET: 1100 New York Avenue, N.W. STREET: 9th Floor, East Tower CITY: WASHINGTON, D.C. STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    176 LAWYQQKPGQSPKVLIYWASTRESGVPDRFTGSGSGSTDFTLTISSVQAEDLAVYYCKQSY 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   253 SYPLTFGAGTKLELK 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS DOS Tes
SOFTWARE: MS WORD, WINDOWS 95, Ver. 4.0
                                                                                     83
                                                                                                                     61
                                                                                                                                                    23
                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: FILING DATE: Octob
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/08/8
FILING DATE: June 16, 1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     87
                                                                                                                                                                                                                                                                                                                                      TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                       QVKLQESGAELVRSGASVNLSCTASGFNIKDYYNHWVKQRPEEGLEWIGYIDPESGETEY 60
                                    SSGGGGSGGGGGGGGDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQ 180
          SSGGGGSGGGGGGGGGDIELTQSPFSLTVTAGEKVTMNCKSGQSLLNSVNQRNYLTWYQ
                                                                                   SDNVKGRFTISRDNGKNTLYLQMSSLKSEDTAVYYCARHGYYG-KGY-FDYWGQGTTVTV 140
                                                                                                                 APNEQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                                                                                                                                    QVQLQESGGDLVKPGGSLTLSCATSGFTFSSYAFSWVRQTSDKSLEWVATISSTDTYTYY 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NLP-TFGGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MHWFQQKPGTSPKLWIYSTSNLASGVPARFSGSGSGTSYSLTISRMEAEDAATYYCQQRS 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTVTVSSGGGGSGGGGGGGGSENVLTQSPAIMSASPGEKVTITCSASSSV-----SY 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTVTVSSGGGGSGGGGSGGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNY 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APKFQGKATFTTDTSSNTAYLQLSSLTSEDTAVYYCN-----EGTPTGPYYFDYWGQG 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TRY: UNITED STATES 20005-3918
                                                                                                                                                                                                                                                                                                                                                      H: 282 amino acids amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0, Application US/08860174A 5989830
                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                      protein
                                                                                                                                                                                                                                                                                                                                                                                                   October 16, 1995

UMBER: PCT/EP/96/03605

August 14, 1996

EQ ID NO: 10:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A BIFUNCTIONAL OR BIVALENT ANTIBODY FRAGMENT ANALOGUE
                                                                                                                                                                                                                     66.7%; Score 877.5; DB 2; 68.0%; Pred. No. 2.3e-66; tive 20; Mismatches 57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EP 95307332.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US/08/860,174A
                                                                                                                                                                                                                   20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOS Text
                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                        282;
                                                                                                                                                                                                                     Ψ
                                                                                                                                                                                                                     Gaps
                   200
                 Š
                                                                                δÃ
                                                                                                                   멍
                                                                                                                                                  δÃ
                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                        ; TOPOLOGY: linear; MOLECULE TYPE: protein US-08-661-052-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-661-052-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Patent No. 5837243
GENERAL INFORMATION:
                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                      Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 16,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
LENGTH: 553 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                   338
                                                                                                                                                                                       278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                         TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY: USA
ZIP: 02109-1875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: Boston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FGGGTKLEIK 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FGGGTKLEIK 249
Massachusetts
                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Yashwant M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LAHIVE
```

```
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOTTWARE: PatentIn Release #1.0, Ve
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/661,052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: (617)227-5941 INFORMATION FOR SEQ ID NO: 16:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REGISTRATION NUMBER: 35,430
REFERENCE/DOCKET NUMBER: MX
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617)227-7400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
NAME: Arnold, Beth E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: THERAPEUTIC COMPOUNDS COMPRISED TITLE OF INVENTION: OF ANTI-FC RECEPTOR ANTIBODIES NUMBER OF SEQUENCES: 16
                                                                         391 TVTVSSGGGSGGGSGGGSENVLTQSPAINSASPGEKVTITCSASSSV-----SYM 443
                                                                                                      117 TVTVSSGGGGSGGGGGGGGGDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYL 176
                          177 AWYQQKPGQSFKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 07-JUNE-1995
                                                                                                                                                                                                                                                                                                        2 VKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEYA 61 :|||:|||||||||||
                                                                                                                                                                                                                               PHFQGKATVTADTSSHTAYLHLSSLTSEDTTVYYCHAVIYYEYDG-----YALDYWGQGT 116
                                                                                                                                                                                                                                                                              IKLQQSGAELVRSGTSVKLSCTASGFNIKDSYMHWLRQGPEQGLEWIGWIDPENGDTEYA 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PKFQGKATFTTDTSSNTAYLQLSSLTSEDTAVYYCN-----EGTPTGPYYFDYWGQGT 390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QKPGQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLP-T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6, Application US/08661052
5837243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              553 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60 State Street,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chezian Somasundaram
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PatentIn Release #1.0, Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Joel Goldstein
Robert Graziano
                                                                                                                                                                                                                                                                                                                                                                                  66.7%; Score 877; DB 2; Length 553; 66.5%; Pred. No. 5.8e-66; tive 29; Mismatches 36; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          & COCKFIELD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            35,430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               08/484,172
MXI-043CP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Suite 510
                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                            236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       260
```

밁

444 HWFQQKPGTSPKLWIYSTSNLASGVPARFSGSGSGTSYSLTISRMEAEDAATYYCQQRSS 503

```
Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멍
 В
                                                             밁
                                                                                          Ş
                                                                                                                                                                                                        ; MOLECULE TYPE: US-08-797-689-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-797-689-18
                                                                                                                           Matches 164;
                                                                                                                                          Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                     INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 31-JAN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/FR93/00085
                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES: 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                    TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 28-JAN-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        504 YPLTFGAGTKLELK 517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         237 LP-TFGGGTKLEIK 249
                                                                                                                                                                                                                                                  LENGTH: 249 amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US C.,
APPLICATION NUMBER: US C.,
APPLICATION NUMBER: FR 92/01064
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: UZIP: 19426
64 NGKFKGKATLTADRSSSTAYMQLSSLTSVGSAVYFCAKENNR--FDERGYYAMDYWGQGT 121
                            61 APNFQGKATYTADTSSNTAYLHLSSLTSEDTTVYYC----NAVIYYEYDGYALDYWGQGT 116
                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                        TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                   TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                      NAME: Smith Ph.D., Julie K. REGISTRATION NUMBER: P-38,6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/08/797,689
FILING DATE: 31-JAN-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE
                                                                            1 QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY 60
                                                             QVQLEQSGPELVKPGASVKISCKASGYAFSRSWMNWVKQRPGQGLEWIGRIYPGDGDTKY 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3, Application US/08797689
5876969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Collegeville
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            E: Rhone-Poulenc Rorer Inc. 500 Arcola Road, 3C43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Jung, Gerard
Yeh, Patrice
                                                                                                                                                                                                                                                                    249 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fournier, Alain
Guitton, Jean-Dominique
                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                        (610)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fleer,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Word 5.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Macintosh
                                                                                                                                                                                                                                                                                                                                       (610)
                                                                                                                                                                                                                                                                                                                                                                                                                                      28-JAN-1993
                                                                                                                                                                                                                                                                                                                      454-3808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Reinhard
                                                                                                                                          64.18;
64.68;
                                                                                                                                                                                                                                                                                                                                     454-3839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CONTAINING SAID POLYPEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NOVEL BIOLOGICALLY ACTIVE POLYPEPTIDES, PREPARATION THEREOF AND PHARMACEUTICAL COMPOSITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              System 7.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (PatentIn)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US 08/256,927
                                                                                                                                                                                                                                                                                                                                                                   P-38,619
ER: ST92006-US
                                                                                                                         39;
                                                                                                                                       Score 842.5; DB 2
Pred. No. 1.7e-63;
                                                                                                                           Mismatches
                                                                                                                                                       DB 2;
                                                                                                                           38;
                                                                                                                                                       Length
                                                                                                                         Indels 13;
                                                                                                                                                         249;
                                                                                                                         Gaps
```

Ωy

82

...

EYSASVKGRFIVSRDTSQSILYLQMNALRAEDTAIYYC-ARNYYGSTWY-FDVWGAGTTV 139

```
γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
 B
                                                                                                                                                      ; MOLECULE TYPE: protein US-08-256-790-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 5
US-08-256-790-2
                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                    Matches 165;
                                                                                                                                                                                                                                                          TELEFAX: 703-243-6410 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NJMBER: PCT/EE
APPLICATION NJMBER: PCT/EE
FILING DATE: 15-JAN-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: EP 921
APPLICATION NUMBER: EP 921
APPLICATION NUMBER: P1LING DATE: 23-JAN-1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/256,79
FILING DATE: '22-UIL-1994
                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENČE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: PLUECKTHUN, APPLICANT: PACK, PETER
                                                                                                                                                                                                                                                                                                            TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             237 LP-TFGGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  177 AWYQQKPGQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYN 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  117 TVTVSSGGGGGGGGGGGGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYL 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY: U
ZIP: 22201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             236 YPWTFGGGTKLEIK 249
   22
                                                                                                                                                                                                                                                            TELEPHONE: /// TO NO:
                                                                                                                                                                                                                                                                                                                                              REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET:
                                                                                                                                                                                        TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                        LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE:
                   1 QVKLQESGAELVRSGASVNLSCTASGENIKDYYMHWVKQRPEEGLEWIGYIDPESGE--T 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2, AFE
NO. 5910573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TVTVSSGGGGSGGGGGGGSNIQLTQSPNSMSTSVGDRVSITCKASQDVDTS-----V
EVKLVESGGGLVQPGGSLRLSCATSGFTFSDFYMEWVRQPPGKRLEWIAASRNKGNKYTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AWYQQKPGQSPKLLIYWASTRHTGVPDRFTGSGSGTDFTLTISNVQSEDSADYFCQQYSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ARLINGTON
                                                                                                                                                                                                      amino acid
                                                                                                                                                                                                                                                                                                                                                             HAMLET-KING, DIANA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ٧A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Application US/08256790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               E: MILLEN, WHITE, ZEI 2200 CLARENDON BLVD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             USA
                                                                                                                                                                                                                          277 amino acids
                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PLUECKTHUN, ANDREAS
                                                                                                                                                                                                                                                                                              703-243-6333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Floppy disk
                                                                            63.28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FUSION PROTEINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MONOMERIC AND DIMERIC ANTIBODY FRAGMENT
                                                                                                                                                                                                                                                                                                                                                                                                                  EP 92101069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         us/08/256,790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PCT/EP93/00082
                                                                                                                                                                                                                                                                                                                                         33,302
                                                                                                                                                                                                                                                            2
                                                                    29;
                                                                                                                                                                                                                                                                                                                              MERCK 1598
                                                                                    Score 831.5; DB 2
Pred. No. 1.6e-62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZELANO & BRANIGAN, P.C
/D. SUITE 1400
                                                                Mismatches
                                                                    53;
                                                                                                  2;
                                                                    Indels
                                                                                                  Length 277;
                                                                    5.
                                                                  Gaps
 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    175
```

4 1

밁 Š

140 TVSSGGGSGGGGGGGGDIVMTQSPSSLSVSAGERVTMSCKSSQSLLNSGNQKNFLAW 199

TVSSGGGSGGGGGGGGGDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAW 178

```
Ş
                                                                   US-08-553-497A-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-553-497A-20
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                   TELEFAX: 703-243-6410
NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                 FILING DATE: 02-DEC-1994
ATTORNEY/AGENT INFORMATION:
ANAME: HAMLET-KING, DIANA
REGISTRATION UNMER: 33,302
REFERENCE/DOCKER
                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER: METELECOMMUNICATION INFORMATION: 703-243-6333
                                                                                                                                                                                                                                                                                                             FILING DATE: 17-MAR-PRIOR APPLICATION DATA:
APPLICATION NUMBER: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: PIULATS, JAUME
TITLE OF INVENTION: ANTI-EGFR:
TITLE OF INVENTION: ANTIBODIES
NUMBER OF SEQUENCES: 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                  SEQUENCE CHARACTERISTICS:
LENGTH: 244 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOCTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                   MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: FILING DATE: 17-NOV-CLASSIFICATION: 530 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               179 YQQKPGQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLP 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            260 LTFGAGTKLELK 271
                                                                                                                                                                    TELEPHONE: /v3 --- TO NO:
                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: EP 9 FILING DATE: 17-MAR-1994
                                                                                                 TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: WO PCT/EP95/00978 FILING DATE: 16-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: ARLINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE: MILLEN, WHITE, ZELANO & BRANIGAN, P.C STREET: 2200 CLARENDON BLVD. SUITE 1400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -TEGGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            YQQKPGQPPKLLIYGASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCQNDHSYP 259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22201
                                                                                                              amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ٧A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/08553497A
                                                                                                                                  244 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MITJANS, FRANSESC
ROSELL, ELISABET
BLASCO, FRANCESC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADAN, JAUME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GUSSOW, DETLEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BENDIG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ANSELL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KETTLEBOROUGH, C. A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JMBER: US/08/553,497A
17-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEITH H.
 62.6%;
63.1%;
                                                                                                                                                                                                                                                                                                                                                                      EP 94104160.0
                                                                                                                                                                                                                                    MERCK: 1726
 Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SINGLE-CHAIN FVS AND ANTI-EGFR
 823.5; DB 2;
No. 6.5e-62;
               Length 244;
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                 ; MOLECULE TYPE: US-08-661-052-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-661-052-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Patent No. 5837243
GENERAL INFORMATTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/48
FILING DATE: 07-JUNE-1995
ATTORNEY/AGENT INFORMATION:
NAME: ATTOOLd, Beth E.
REGISTRATION NUMBER: 35,430
REFERENCE/DOCKET NUMBER: MXI-
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                INFORMATION FOR SEQ ID NO:
                                                                                                                                                              SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA: APPLICATION NUMBER: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Chezian Somasundaram TITLE OF INVENTION: THERAPEUTIC TITLE OF INVENTION: OF ANTI-FC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                   TYPE: a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         233 YTFGGGTKLEIK 244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        239 -TFGGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY: USA
ZIP: 02109-1875
                                                                                                                 TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                    TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SSGGGGSGGGGSGGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQ 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NEKFKSKATLTVDKSSSTAYMQLSSLTSEDSAVYYC-ASRDYDYDGRYFDYWGQGTTVTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APNFQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QKPGQSPKVLTYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLP--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SSGGGGSGGGGGGGDIELTQSPAIMSASPGEKVTMTCSASSSV-----SYMYWYQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EVQLQQSGAELVKPGASVKLSCKASGYTFTSHWMHWVKQRAGQGLEWIGEFNPSNGRTNY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QKPGSSPRLLIYDTSNLASGVPVRFSGSGSGTSYSLTISRMEAEDAATYYCQQWSSYPPM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        159;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Boston
                                                                                                                               amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60 State Street,
                                                                                                                                                 301 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                               : (617)227-7400
(617)227-5941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Joel Goldstein
Robert Graziano
                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Yashwant M. Deo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LAHIVE & COCKFIELD
                                                                                              protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      THERAPEUTIC COMPOUNDS COMPRISED OF ANTI-FC RECEPTOR ANTIBODIES
62.2%; Score 818; DB 2; 62.1%; Pred. No. 2.4e-61; tive 37; Mismatches 55
                                                                                                                                                                                                                                                                                                                                                                                      US/08/661,052
                                                                                                                                                                                   14:
                                                                                                                                                                                                                                                                                                                                    08/484,172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Suite 510
                                                                                                                                                                                                                                                     MXI-043CP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        49;
                             Length 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        172
```

Matches 154; Query Match
Best Local Similarity

Conservative

Indels

ν,

Gaps

Ŋ

밁 Ş

В δÃ δõ

DЪ

밁

amino acid

Ψ

```
US-08-553-497A-26
TELEFAX: 703-243-6410 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 itent No. 584*...
itent No. 584*...
retrile
                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
APPLICATION NUMBER: WO PCT/EP95/00978
FILING DATE: 16-MAR-1995
                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: F10ppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTION DATA:
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/553,497A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                    REGISTRATION NUMBER: 33,302
REFERENCE/DOCKET NUMBER: MEI
TELECOMMUNICATION INFORMATION:
TELEPHONE: 703-243-6333
                                                                                                                       APPLICATION NUMBER: EP 94
FILING DATE: 02-DEC-1994
ATTORNEY/AGENT INFORMATION:
NAME: HAMLET-KING, DIANA
                                                                                                                                                                                            APPLICATION NUMBER: EP 9. FILING DATE: 17-MAR-1994 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                  FILING DATE: 16-MAR-PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: ANTI-EGFR SINGLE-CHAIN FVS AND ANTI-EGFR TITLE OF INVENTION: ANTIBODIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 17 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY: UZIP: 22201
                                                  TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QGTKVEIK 266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SGGGGSGGGGGGGGDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQQ 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KPGQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLPTFG 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DSVKGRFTISRDNSKNTLFLQMDSLRPEDTGVYFC-ARGYYRYEG-AMDYWGQGTPVTVS 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IQLVESGGGVVQPGRSLRLSCSSSGFIFSDNYMYWVRQAPGKGLEWVATISDGGSYTYYP 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VKLQESGAELVRSGASVNLSCTASGENIKDYYMHWVKQRPEEGLEWIGYIDPESGETEYA 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KPGKAPKLLIYWASTRESGVPSRFSGSGSGTDFTFTISSLQPEDIATYYCHQYLSSWTFG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SGGGGSGGGGGGGGDTQLTQSPSSLSASVGDRVTTTCKSSQSVLYSSNQKNYLAWYQQ 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ARLINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ٧A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Application US/08553497A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           E: MILLEN, WHITE, ZELANO & BRANIGAN, P.C 2200 CLARENDON BLVD. SUITE 1400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MITJANS, FRANSESC
ROSELL, ELISABET
BLASCO, FRANCESC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PIULATS, JAUME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ANSELL, KEITH I
GUSSOW, DETLEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BENDIG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KETTLEBOROUGH, C. A.
                                                                                                                                                                                                                                                                                                                                  NUMBER: US/08/553,497A
17-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JAUME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEITH H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MARY M
                                                                                                                                                                             EP 94118970.6
                                                                                                                                                                                                                                     EP 94104160.0
                                                                                       MERCK 1726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY:
```

```
; MOLECULE TYPE: protein US-08-553-497A-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-553-497A-24
                                                                                                                                                                                                                                                                                     COUNTRY: US

ZIP: 22201

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/553,497A

FILING DATE: 17-NOV-1995

CLASSIFICATION: 530

PRIOR APPLICATION DATA:

COMPANY OF THE PROPERTY OF THE P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 24, Appl Patent No. 584409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                          APPLICATION NUMBER: WO PCT/EP95/00978
FILING DATE: 16-MAR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: EP 94104160.0
FILING DATE: 17-MAR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
ADDRESSEE: MILLEN, WHITE, ZELANO & BRANIGAN, P.C
STREET: 2200°CLARENDON BLVD. SUITE 1400
                                                                       FILING DATE: .17-MAR-PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET: 2200 CL
CITY: ARLINGTON
STATE: VA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 NEKFKSKATLTVDKSSSTAYMQLSSLTSEDSAVYYC-ASRDYDYDGRYFDYWGQGTTVTV 119
APPLICATION NUMBER: EP 94118970.6 FILING DATE: ,02-DEC-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FGGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QKPGQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLP-T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SSGGGSGGGGSGGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQ 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APNFQGKATVIADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QKTGSSPRLLIYDTSNLASGVPVRFSGSGSGTSYSLTISRMEAEDAATYYCQQWSSYPLT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SSGGGGSGGGSGGGSDIELTQSPTIMSASPGEKVTMTCSDSSSV-----SYTYWYQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              160;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/08553497A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MITJANS, FRANSESC
ROSELL, ELISABET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PIULATS, JAUME VENTION: ANTI-EGFR SINGLE-CHAIN FVS AND ANTI-EGFR VENTION: ANTIBODIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ANSELL, KEITH F
GUSSOW, DETLEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BLASCO, FRANCESC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BENDIG, MARY M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KETTLEBOROUGH, C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JAUME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEITH H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 813.5; DB 2;
Pred. No. 4.4e-61;
8; Mismatches 53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    232
```

```
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-553-497A-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뭉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-553-497A-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 159;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO: 24: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      itent No.
                            MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REGISTRATION NUMBER: 33,302
REFERENCE/DOCKET NUMBER: ME
TELECOMMUNICATION INFORMATION:
                                                                                                 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION: NAME: HAMLET-KING, DIANA
                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            233 PMYTFGGGTKLEIK 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121 SSGGGGSGGGGSGGG--GSDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAW 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: 6
APPLICATION NUMBER: US/08/553,497A FILING DATE: 17-NOV-1995
                                                                                                                                                     COUNTRY:
                                                                                                                                                                                         CITY: ARLINGTON
                                                                                                                                                                                                        STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 NEKFKSKATLTVDKSSSTAYMQLSSLTSEDSAVYYC-ASRDYDYDGRYFDYWGQGTTVTV 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY 60 :|:||:||||| :| :| || || || :| :| || ||
                                                                                                                                                                                                                            DDRESSEE:
                                                                                                                                                                                                                                                                            LE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APNFQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                YQQKPGQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLP 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              YQQKPGSSPRLLIYDTSNLASGVPVRFSGSGSGTSYSLTISRMEAEDAATYYCQQWSSYP 232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SSGGGGSGGGGGGGGGSDIELTQSPTIMSASPGEKVTMTCSDSSSV-----SYMYW 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EVQLQQSGAELVKPGASVKLSCKASGYTFTSHWMHWVKQRAGQGLEWIGEFNPSNGRTNY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22, Application US/08553497A
>. 5844093
                                                                                                                                   22201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               amino acids
                                                                                                                                                                         ٧A
                                                                                                                                                                                                        E: MILLEN, WHITE, ZEI
2200 CLARENDON BLVD.
                                                                                                                                                       SD
                                                                                                                                                                                                                                                                                                                                                                                                  ANSELL, KEITH H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   703-243-6410
                                                                                                                                                                                                                                                                                         PIULATS, JAUME
//ENTION: ANTI-EGFR SINGLE-CHAIN FVS AND ANTI-EGFR
                                                                                                                                                                                                                                                                                                                                                                 MITJANS, FRANSESC
                                                                                                                                                                                                                                                                                                                                                                                     ADAN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                               BLASCO, FRANCESC
                                                                                                                                                                                                                                                                                                                                            ROSELL, ELISABET
                                                                                                                                                                                                                                                                                                                                                                                                                                BENDIG, MARY M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  KETTLEBOROUGH, C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      703-243-6333
                                                                                                                                                                                                                                                                                                                                                                                JAUME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61.7%;
                                                                                                                                                                                                                                                                            ANTIBODIES
                                                                                                                                                                                                        WHITE, ZELANO & BRANIGAN, P.C. NDON BLVD. SUITE 1400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   33,302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             32; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MERCK 1726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 811.5; DB 2
Pred. No. 6.6e-61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 246;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels 13; Gaps
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δδ
                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                        US-08-392-338A-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g MOLECULE TYPE: protein
US-08-553-497A-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                            Patent No.
                                                                                                                                                                                                                                                                                                                           Sequence 19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION FOR SEQ ID NO
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                        APPLICANT: Filpula, David
TITLE OF INVENTION: Multivalent Antigen-Binding Proteins
NUMBER OF SEQUENCES: 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 02-DEC-1994
ATTORNEY/AGENT INFORMATION:
NAME: HAMLET-KING, DIANA
REGISTRATION NUMBER: 33,302
REFERENCE/DOCKET NUMBER: ME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE: 703-243-6333
                                                                                                                                                              CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                         233 YTFGGGTKLEIK 244
                                                                                                                                                                                                                                                                                                                                                                                                                                     239 -TFGGGTKLEIK 249
                                                               COUNTRY: U.S.A. ZIP: 20005
                                                                                               CITY: Washington STATE: D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE: 703-243-6410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                              STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 NEKIKSKATLTYDKSSSTAYMQLSSLTSEDSAVYYC-ASRDYDYDGRYFDYWGQGTTVTV 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                               ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QKPGQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLP-- 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SSGGGGSGGGCSGGGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLENSRTRKNYLAWYQ 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SSGGGGSGGGGSGGGSDIELTQSPTIMSASPGEKVTMTCSDSSSV-----SYMYWYQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APNFQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EVQLQQSGAELVKPGASVKLSCKASGYTFTSHWMHWVKQRAGQGLEWIGEFNPSNGRTNY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              157;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            amino acid
                                                                                                                                                                                                                                                                                                                           Application US/08392338P
                                                                                                                              1100 New York Avenue,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             244 amino acids
                                                                                                                                                                                                                                                                            Whitlow, Marc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                          Bird,
                                                                                                                                                                                                                                                          Wood, James
                                                                                                                                                                                                                                            Hardman, Karl
                                                                                                                                            Sterne, Kessler, Goldstein & Fox P.L.L.C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOMBER: EP 94118970.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17-MAR-1994
                                                                                                                                                                                                                            Robert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61,5%;
62.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO PCT/EP95/00978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EP 94104160,0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MERCK 1726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 808.5;
Pred. No. 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .2e-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
```

```
Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ф
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; TOPOLOGY: 1:
; MOLECULE TYPE:
US-08-392-338A-19
                                                                                                                                                                                                                                                                                                                  US-09-166-750-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 156;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/989,846
FILING DATE: 20-NOV-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/796,936
FILING DATE: 25-NOV-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                               tent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 483 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Goldstein, Jorge A.
REGISTRATION NUMBER: 29,021
REFERENCE/DOCKET NUMBER: 0977.0030007
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION DATA:
                                                                                  NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
                                                                                                                  TITLE OF INVENTION:
                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                       APPLICANT:
                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                      346 FGAGTKLVLK 355
                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 SSGGGSGGGGGGGGDIELTQSPSSLAVSAGEKVAMSCKSSQSLENSRTRKNYLAWYQ 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  188 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTRSL-----NMAYWGQGTSVTV 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181 QKPGQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLP-T 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     128
                             CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OPERATING SYSTEM:
COUNTRY:
                                               STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 APNFQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn
                                                                   ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY 60
                                                                                                                                                                                                                                                                                                                                                                                                          FGGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QKPGQSPKLLIYWASARESGVPDRFTGSGSGTDFTLSISSVKTEDLAVYYCQQYYSYPLT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QVQLQQSDAELVKPGASVKISCKASGYTFTDHAIHWVKQNPEQGLEWIGYFSPGNDDFKY 187
                                                                                                                                                                                                                                                                              9, Application US/09166750
6025165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                amino acid
                D.C.
                                               E: Sterne, Kessler, Goldstein & Fox P.L.L.C
1100 New York Avenue, NW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                483 amino acids
                                                                                                                                                   Filpula, David
Rollence, Michelle
                                                                                                                                                                                                          Wood, James F
Hardman, Karl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (202)
                                                                                                                                                                                      Bird, Robert
                                                                                                                                                                                                                                             Whitlow, Marc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22-FEB-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     371-2540
                                                                                                                    Methods for Producing Multivalent Antigen-Binding Proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PC-DOS/MS-DOS
In Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61.1%; Score 803.5; DB 2; 62.4%; Pred. No. 7.1e-60; tive 32; Mismatches 39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US/08/392,338A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                         345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ω
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                              δ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                            RESULT 13
US-09-166-093-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; MOLECULE TYPE: :protein US-09-166-750-19
                                                                                                                                                   Patent No. 6027725
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 156;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                              Sequence 19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: (202) 371-25
INFORMATION FOR SEQ ID NO:
                                                                                         APPLICANT: Whitlow, Marc APPLICANT: Wood, James F APPLICANT: Hardman, Karl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
NAME: GOLISTEAIN, JOTGE A.
REGISTRATION NUMBER: 29,021
REFERENCE/DOCKET NUMBER: 09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US 08/392,338
FILING DATE: 22-FEB-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/989,846
FILING DATE: 20-NOV-1992
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: PatentIn Rele
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US,
FILING DATE: 'Herewith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZIP: 20005 COMPUTER READABLE FORM:
            APPLICANT: Filpula, David
APPLICANT: Rollence, Michelle
TITLE OF INVENTION: Multivalent Antigen-Binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELECOMMUNICATION, INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION:
PRIOR APPLICATION DATA:
                                                                           APPLICANT:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                    346 FGAGTKLVLK, 355
                                                                                                                                                                                                                                                                                                                                                                         *286 QKPGQSPKLLIYWASARESGVPDRFTGSGSGTDFTLSISSVKTEDLAVYYCQQYYSYPLT
                                                                                                                                                                                                                                                                                                                                                                                                        181 QKPGQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLP-T 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 SSGGGGSGGGSGGGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQ 180
                                                                                                                                                                                                                                                                                                                                 240 FGGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            128 QVQLQQSDAELVKPGASVKISCKASGYTFTDHAIHWVKQNPEQGLEWIGYFSPGNDDFKY 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: ami
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US 0 FILING DATE: 25-NOV-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDIUM TYPE: Floppy disk
COMPUTER: IBM.PC compatible
OPERATING SYSIEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 APNFQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 QVKLQESGABLVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGVIDPESGETEY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 S-----;----SDVVMSQSPSSLPVSVGEKVTLSCKSSQSLLYSGNQKNYLAWYQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTRSL-----NMAYWGQGTSVTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 amino acid
                                                                                                                                                                                            Application US/09166093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      483 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                       Bird, Robert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (202)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             371-2540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  371-2600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         us: 07/796,936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US/09/166,750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0977.003000C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 803.5; DB 3; Pred. No. 7.1e-60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
```

ω

285

240

Bird, Robert

```
RESULT 14
US-09-172-019-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-166-093-19
                                                          Sequence 19, Application US/09172019 Patent No. 6103889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION FOR SEQUENCE CHARACTERISTICS:
LENGTH: 483 amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 156;
GENERAL INFORMATION:
APPLICANT: Whitlo
APPLICANT: Hardma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Goldstein, Jorge A.
REGISTRATION NUMBER: 29,021
REFERENCE/DOCKET NUMBER: 0977.003000B
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US 07/796,936 FILING DATE: 25-NOV-1991 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US 07/989,846 FILING DATE: 20-NOV-1992 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/392,338
FILING DATE: 22-FEB-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                188
                                                                                                                                                                                                                                                                  286 QKPGQSPKLLIYWASARESGVPDRFTGSGSGTDFTLSISSVKTEDLAVYYCQQYYSYPLT
                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 APNFQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: FILING DATE: Herew
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET: 1100 New CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY 60
                                                                                                                                                                                                                                                                                                                                                                         SSGGGGSGGGGGGGGDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQ 180
                                                                                                                                                                                    FGAGTKLVLK 355
                                                                                                                                                                                                         FGGGTKLEIK 249
                                                                                                                                                                                                                                                                                         QKPGQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLP-T
                                                                                                                                                                                                                                                                                                                                                S-----SDVVMSQSPSSLPVSVGEKVTLSCKSSQSLLYSGNQKNYLAWYQ 285
                                                                                                                                                                                                                                                                                                                                                                                                                              NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTRSL-----NMAYWGQGTSVTV 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QVQLQQSDAELVKPGASVKISCKASGYTFTDHAIHWVKQNPEQGLEWIGYFSPGNDDFKY 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1100 New York Avenue,
Whitlow, Hardman,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Herewith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61.1%; Score 803.5; DB: 62.4%; Pred. No. 7.1e-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kessler, Goldstein & Fox P.L.L.C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US/09/166,093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            32; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 483;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                    345
                                                                                                                                                                                                                                                                                                        239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ω
```

밁

Ş В Ş B δõ

В δÃ 밁 Ş

RESULT 15 US-09-166-094-19

```
밁
                                                                     Š
                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; MOLECULE TYPE: US-09-172-019-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: (202) 371-2540 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 25-NOV-1991
ATTORNEY/AGENT INFORMATION:
NAME: Goldstein, Jorge A.
REGISTRATION HUMBER: 29,021
REFERENCE/DOCKET NUMBER: 0977
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 20-NOV-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0
FILING DATE: 25-NOV-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US 0: FILING DATE: 22-FEB-1995 PRIOR APPLICATION NUMBER: US 0: APPLICATION NUMBER: US 0: OF THE PRIOR APPLICATION N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: 'Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
LENGTH: 483 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: Patentin Ret
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: Nucleic Acid Molecules Encoding Single-Chain TITLE OF INVENTION: Antigen-Binding Proteins (As Amended)
   346
                                                                         240
                                                                                                                                                  286
                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                    188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               128 QVQLQQSDAELVKPGASVKISCKASGYTFTDHAIHWVKQNPEQGLEWIGYFSPGNDDFKY 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 APNFQGKATYTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7 Match 61.1%; Score 803.5; DB 3; Local Similarity 62.4%; Pred. No. 7.1e-60; hes 156; Conservative 32; Mismatches 39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET: 1100 New CITY: Washington STATE: D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
CLASSIFICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
                                                                                                                                                                                     QKPGQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLP-T
                                                                                                                                                                                                                                                                                                                                        SSGGGGSGGGSGGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQ 180
FGAGTKLVLK 355
                                                                     FGGGTKLEIK 249
                                                                                                                                                  QKPGQSPKLL1YWASARESGVPDRFTGSGSGTDFTLSISSVKTEDLAVYYCQQYYSYPLT
                                                                                                                                                                                                                                                                                                                                                                                                                                                    NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTRSL-----NMAYWGQGTSVTV
                                                                                                                                                                                                                                                                                                 S-----SDVVMSQSPSSLPVSVGEKVTLSCKSSQSLLYSGNQKNYLAWYQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  483 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        E: Sterne, Kessler, Goldstein & Fox P.L.L.C 1100 New York Avenue, NW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Filpula, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Release #1.0, Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US 07/796,936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US 07/989,846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US/09/172,019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US 08/392,338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 483;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                            239
                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60
                                                                                                                                                      345
                                                                                                                                                                                                                                                                                                     285
```

ω

```
QΥ
                                             В
                                                                                    δÃ
                                                                                                                                      В
                                                                                                                                                                               δõ
                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                          QΥ
                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; TOPOLOGY: linear; MOLECULE TYPE: protein US-09-166-094-19
                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 61.1
Best Local Similarity 62.4
Matches 156; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 19, Application US/09166094 Patent No. 6121424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/392,338

FILING DATE: 22-FEB-1995

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/989,846

FILING DATE: 20-NOV-1992

PRIOR APPLICATION DATA:

APPLICATION UMBER: US 07/796,936

FILING DATE: 25-NOV-1991

APPLICATION TORNALTION:

APPLICATION TORNALTION:

APPLICATION TORNALTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: (202) 371-2540
INFORMATION FOR SEQ ID NO: 13
SEQUENCE CHARACTERISTICS:
LENGTH: 483 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Rollence, Michelle
TITLE OF INVENTION: Multivalent Antigen-Binding Proteins
NUMBER OF SEQUENCES: 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELECOMMUNICATION INFORMATION:
                                             286 QKPGQSPKLLIYWASARESGVPDRFTGSGSGTDFTLSISSVKTEDLAVYYCQQYYSYPLT
                                                                                    181 QKPGQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLP-T 239
                                                                                                                                                                121 SSGGGGSGGGGSGGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQ 180
                                                                                                                                                                                                                                                                                                                     128 QVQLQQSDAELVKPGASVKISCKASGYTFTDHAIHWVKQNPEQGLEWIGYFSPGNDDFKY 187
240 FGGGTKLEIK 249
                                                                                                                                                                                                                          188 NERFKGKATLTADKSSSTAYVQLNSLTSEDSAVYFCTRSL-----NMAYWGQGTSVTV 240
                                                                                                                                                                                                                                                    61 APHFQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: Goldstein, Jorge A. REGISTRATION NUMBER: 29,0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                1 QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SSEE: Sterne, Kessler, Goldstein & Fox P.L.L.C.
T: 1100 New York Avenue, NW
Washington
: D.C.
: D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hardman, Karl
Bird, Robert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Filpula, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Whitlow, Marc
Wood, James F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Herewith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             371-2540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     371-2600
                                                                                                                                                                                                                                                                                                                                                                                                         61.1%; Score 803.5; DB 3; Length 483; 62.4%; Pred. No. 7.1e-60; ative 32; Mismatches 39; Indels 23; Gaps
                                                                                                                                 -SDVVMSQSPSSLPVSVGEKVTLSCKSSQSLLYSGNQKNYLAWYQ 285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US/09/166,094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29,021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0977.003000A
```

ω

Db 346 FGAGTKLVLK 355

Search completed: February 12, 2001, 15:23:46 Job time: 60 sec

(4-4) de 24)

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Minimum DB seq
Maximum DB seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
9
9
                                                                                                                                                                                                                                                                                                                      Pred. No. is the number of results predicted by chance to h score greater than or equal to the score of the result bein and is derived by analysis of the total score distribution.
548.6
548.6
510.2
501.6
501.6
466.8
457.6
                                                                                                                                                                                                                                  Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length: 0
length: 2000000000
100.0
73.4
73.4
73.4
68.3
67.5
67.1
62.4
62.0
61.7
61.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N_Geneseq_36:*
1: /cgn2_2/gcgdata/geneseq/geneseqn/NA1980.DAT
2: /cgn2_2/gcgdata/geneseq/geneseqn/NA1981.DAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      February 17, 2001, 23:01:10; Search time 96.92 Seconds (without alignments) 2895.378 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             480022 segs, 187831343 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-297-181-3
747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   caggtcaagctgcaggagtc.....gcaccaagctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /cgn2_2/gcgdata/geneseq/geneseqn/NA1986.DAT:*
/cgn2_2/gcgdata/geneseq/geneseqn/NA1987.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cgn2_2/gcgdata/geneseq/geneseqn/NA1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cgn2_2/gcgdata/geneseq/geneseqn/NA1984.DAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cgn2_2/gcgdata/geneseq/geneseqn/NA19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /cgn2_2,
/cgn2_2,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /cgn2_2,
/cgn2_2,
                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cgn2_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cgn2_i
                                                                       1668
744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /gcgdata/geneseq/geneseqn/NA198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'gcgdata/geneseq/geneseqn/NA1988.DAT:*
                                                                                                                                                                                                                                    DB
                                                                                                                                                                                                                                                                                                                                                                                                              /gcgdata/geneseq/geneseqn/NA1998.DAT:
/gcgdata/geneseq/geneseqn/NA1999.DAT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /gcgdata/geneseq/geneseqn/NA1993.DAT:*
/gcgdata/geneseq/geneseqn/NA1994.DAT:*
/gcgdata/geneseq/geneseqn/NA1995.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /gcgdata/geneseq/geneseqn/NA1989.DAT:*
/gcgdata/geneseq/geneseqn/NA1990.DAT:*
/gcgdata/geneseq/geneseqn/NA1991.DAT:*
/gcgdata/geneseq/geneseqn/NA1992.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                             /gcgdata/geneseq/geneseqn/NA2000.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                  /gcgdata/geneseq/geneseqn/NA1996.DAT:*
/gcgdata/geneseq/geneseqn/NA1997.DAT:*
                                                                                                                                                                                                                                    Ħ
                X77247
V36236
T86234
                                                                 V36237
V72072
V72059
V72064
V72064
V01651
V10378
X01652
X77243
                                                                                                                                                                                                                                                                                      SUMMARIES
                                                                                                                                                                                                                                                                                                                                   chance to have a result being printed,
                                                                                                                                                                                                                              Description
                                                                                                     Fusion protein pNG
Bispecific tetrava
Anti-CD86 monoclon
                                                                                                                                                         DNA od SCFv D3M wh
Fusion protein pIC
Plasmid pNG4/55.1s
                               Mouse scFV fragmen
Mouse scFV fragmen
DNA of ScFv 421 wh
                                                                                    Bispecific tetrava
             Anti-human protein
```

encoding an	X8661	20	7	9	68.	ū
EGFR sing	6 T04020	16	732	49.5	369.4	4
ecific anti-z	Z8835	2	ω	9.	70.	Ü
e scFV fra	X7724	2	ū	٥	70.	N
i-EGFR singl	T0402	ĭ	72		73.	۲
	X1539	2	16	0	75.	0
NA encoding a	X1539	2(	16		75.	φ
C49 single	X2540	2(	16	0	75.	ω
C49 single	X2540	2	16		75.	7
	Q6866	1.5	O)	0	75.	σ
C49 VL-L-VH-L-VL	26865	15	16		75.	U
cFv-IgE1 fusion	V8029	20	9	2	94.	4
1/scFv	V8029	2	51	۲	94.	ω
ine anti-5T4 a	V8029	2	N	ω.	95.	N
-5T4 single c	V8029	2	0	ω.	97.	_
man B7-1.5T4.1	V8029	20	46	ω.	97.	0
4 scFv antibod	Z0781	2	N	ω	97.	9
ti-5T4 seco	Z1978	2(	N	ω.	97.	œ
37.2 moi	X0166	2	œ	٠.	40	7
CD30 b	V1139	15	4	9		σ
EcoR1-HindIII inse	T9458	ĭ	ω	9	424	G
715-my	T6614	18	N	σ.	N	4
III-ECOR	T9460	<u></u>	N	9	N	ω
an anti-g	Z2896	2	4	7	42	2
usion prote	V7207	2	ø	7.	28.	۳
ion prote	V7206	2(	4	7	28.	0
i-B7 <sub>:</sub> 2 mo	X0165	20	0	œ.	35.	9
ti-CEA	V0817	2(	7		•	œ
gle chain	T5813	1	67	œ	38.	7
-23 antibod	Q9066	1(	$\mathbf{H}$	9	42.	σ
cleotide sec	V0925	1.2	$\vdash$	9	*	U
ouse scFV fragm	X7724	2	4		8	4
Coding sequence for		<u></u>	S)	0	52.	ω

## ALIGNMENTS

08-SEP-1998 (first entry)

V36237;

V36237 standard; DNA; 747 BP.

```
Single chain antibody; ScFv D3M; mouse; p53 protein; oligomerisation; regulatory domain; p53 mutant; H273; W248; G281; p53-dependent trans-activating activity; restoration; tumour-suppressing activity; tumour cell; treatment;
Restoring p53-dependent trans-activating activity to cell containing mutant p53 - by delivering single-chain antibody specific for the
                                                                                     WPI; 1998-272140/24. P-PSDB; W60770.
                                                                                                                                                                                                                                                                                                                               27-OCT-1997;
                                                                                                                                                                                                                                                                                                                                                                                              07-MAY-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus sp.
                                                                                                                                                                     Debussche L,
                                                                                                                                                                                                                           (RHON ) RHONE-POULENC RORER SA
                                                                                                                                                                                                                                                                                 29-OCT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                              WO9818825-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           hyper-proliferation; cancer; re-stenosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA od ScFv D3M which binds to mutant p53 proteins.
                                                                                                                                                                        Bracco
                                                                                                                                                                                                                                                                                 96FR-0013176.
                                                                                                                                                                                                                                                                                                                                       97WO-FR01921.
                                                                                                                                                                     ŗ
```

Human p53 protein

particularly

for treatment

ō,

```
Ωy
                                                                                              В
                                                                                                                            δÃ
Š
                                밁
                                                                                                                                                              밁
                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                              멍
                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                          멍
                                                                                                                                                                                                                                                                                                                                                                                     ρ
                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                     QV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present sequence encodes a single chain antibody (SCFV) designated D3M. The antibody binds to an epicope present in the C-terminal region of the p53 protein that includes oligomerisation and regulatory domains, specifically between positions 320 and 393. SCFV D3M is directed against p53 mutants, particularly H273, W248 and G281 mutants. When the SCFV is introduced into cells containing a mutant p53 protein, p53-dependent trans-activating activity is restored. SCFV D3M is specific for p53-mutants that have lost tumour-suppressing activity and are present in tumour cells. It is particularly used to treat hyper-proliferation associated with these mutants (e.g. cancer and re-stenosis) but may also be used in vitro for studying mechanisms of activity of p53 or its mutant and to purify or detect p53.
721
                                                                561
                                                                                                                                601
                                                                                                                                                                                              541
                                                                                                                                                                                                                              481
                                                                                                                                                                                                                                                              481
                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                            361
                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    caggtcaagctgcaggagtcaggggcagaacttgtgaggtcagggggcctcagtcaatttg
                                               gtgcaggctgaagacctggcagtttattactgcaagcaatcttataatctaccgacgttc
                                                                                                           gtccctgatcgcttcacaggcagtggatctgggacagatttcactctcaccatcagcagt
                                                                                                                                                                           cagaaaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctgga
                                                                                                                                                                                                                                                                                                           ctcacccagtctccatcttccctggctgtgtcagcaggagagaaggtcgctatgagctgc
                                                                                                                                                                                                                                                                                                                                                                           tcctcaggtggaggcggttcaggcggaaggtggctctggcggtggcggatcggacattgag
                                                                                                                                                                                                                                                                                                                                                                                                                                          tactatgaatacgacggctatgctttggactactggggccaagggaccacggtcaccgtc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ctgcacctcagcagcctgacatctgaggacacaaccgtctattactgtaatgcagtcatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagagg
                                gtgcaggctgaagacctggcagtttattactgcaagcaatcttataatctaccgacgttc
                                                                                              gtccctgatcgcttcacaggcagtggatctgggacagatttcactctcaccatcagcagt
                                                                                                                                                              cagaaaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctgga
                                                                                                                                                                                                                                                            aaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag
                                                                                                                                                                                                                                                                                          ctcacccagtctccatcttccctggctgtgtcagcaggagagaggtcgctatgagctgc
                                                                                                                                                                                                                                                                                                                                                          tcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggacattgag
                                                                                                                                                                                                                                                                                                                                                                                                                         tactatgaatacgacggctatgctttggactactggggccaagggaccacggtcaccgtc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ctgcacctcagcagcctgacatctgaggacacaaccgtctattactgtaatgcagtcatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  caggtcaagctgcaggagtcagggcagaacttgtgaggtcaggggcctcagtcaatttg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                al Similarity
747; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 747 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%;
ilarity 100.0%;
Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                189 A; 188 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; Score 747; DB 19;
; Pred. No. 3.1e-185;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                G; 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                660
                                                                                                                                                              600
                                                                                                                                                                                                                                                              540
                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                                            420
                                                                                                                                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                              540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
```

```
V720772
V72077
                                                                                                                                                                                                        Db ..
                            Ş
                                                                                                                                             Q
                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 630; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This sequence is a used in a method for obtaining a novel gene construct (A) which expresses, in cells of a mammal, a conjugate (B) of a cell-targeting group (I) and a heterologous prodrug-converting enzyme (II), and (B) is directed to leave the cell for selective localisation at a cell surface antigen (Ag) recognised by (I). Delivery of (A) to a target site, then administration of (III) is used for targeted release cytotoxic drug, specifically for treating cancer but also inflammation such as rheumatoid arthritis. In situ generation of the targeting antibody increases selectivity, reducing side effects at normal tissue. The method is applicable to any antibody-directed enzyme prodrug therapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New gene construct expressing conjugate of targeting agent and prodrug-converting enzyme - useful for, e.g. targeted production cytotoxic drug in vivo, especially for treatment of cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conjugate; cell targeting; cytotoxic drug; plasmid; fusion protein; prodrug-converting enzyme; cell surface antigen; treatment; cancer; inflammation; rheumatoid arthritis; antibody; prodrug therapy syste
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 864 BP; 214 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             V72072
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 16; Page 86; 100pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1999-059700/05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           05-MAY-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fusion protein pICI266-55.1scFv tag/his DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9851787-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10-MAY-1997;
                               181
                                                                                          187
                                                                                                                                                   121
                                                                                                                                                                                                              127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             721
                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                  67
                                                                                                                                                                                                                                                                                                                                                                                              Н
                                                                                                                                                                                                                                                                                                            7 caggtccaactgcagcagcctggggctgaactggtgaagcctggggcttcagtgcagctg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N
                                                                                                                                                                                                                                    tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagagg 120
gccccgaacttccagggcaaggccactgtgcagacacatcctccaacacacagcctac
                                                                                                                   cctgaagagg6cctggagtggattggatatattgatcctgagagtggtgaaactgaatat 180
                                                                                                                                                                                                                                                                                                                                                              caggtcaagctgcaggagtcaggggcagaacttgtgaggtcaggggcctcagtcaatttg 60
                                                                                                                                                                                                           tootgoaaggottotggotacaccttcaccggotactggatacactgggtgaagcagagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ggcgggggcaccaagctggaaatcaaa
                                                                                 cctggacaaggccttgagtggattggagggttaatcctagtaccggtcgttctgactac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98WO-GB01294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         73.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         234 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₽P
                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 548.6; DB 20 Pred. No. 1.2e-133;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         232 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches 114;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             184 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ω
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               õ
                                                                                                                                                                                                                 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               of.
```

of. at

۳

```
RESULT
V72059
                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
 밁
                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
New gene construct expressing conjugate of targeting agent and prodrug-converting enzyme - useful for, e.g. targeted production cytotoxic drug in vivo, especially for treatment of cancer
                                                                                                                                                                                                Conjugate; cell targeting; cytotoxic drug; prodrug-converting enzyme; cell surface antigen; treatment; cancer; inflammation; antibody; rheumatoid arthritis; prodrug therapy system; ss.
                                                                                                                                                              W09851787-A2
                                                                                                                                                                                                                                        Plasmid pNG4/55.1scFv/CPG2
                                                                                                       10-MAY-1997;
                                                                                                                        05-MAY-1998;
                                                                                                                                                                                                                                                            10-MAY-1999
                                                                                    (ZENE
                                                                                                                                            19-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             247
                                                                                                                                                                                                                                                                                                                                                784
                                                                                                                                                                                                                                                                                                                                                                 721
                                                                                                                                                                                                                                                                                                                                                                                    724
                                                                                                                                                                                                                                                                                                                                                                                                       661
                                                                                                                                                                                                                                                                                                                                                                                                                          664
                                                                                                                                                                                                                                                                                                                                                                                                                                            601
                                                                                                                                                                                                                                                                                                                                                                                                                                                               604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                   ω
                                      1999-059700/05
DB; W82742.
                                                                                                                                                                                                                                                                                                                                                                                  tactatgaatacgacggctatgctttggactactggggccaaggggaccacggtcaccgtc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ctgcacctcagcagcctgacatctgaggacaccaaccgtctattactgtaatgcagtcatc
                                                                                                                                                                                                                                                                                                                                                ggtggaggcaccaagctcgagatcaaa
                                                                                                                                                                                                                                                                                                                                                         ggcgggggcaccaagctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cagaaaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctgga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             aaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ctcacccagtctccatcttccctggctgtctgccaggaggagaggtcgctatgagctgc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gcctatggttacgacg---atgctatggactactggggccaagggaccacggtcaccgtc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         aatgagaagttcaagaacaaggccacactgactgtagacaaatcctccaccacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                             cagagaccagggcagtctcctaaactgctgatctattgggcatccactaggacatctggg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  aaatccagtcagagtctcctcaacagtagaacccgaaagaactacttggcttggtaccag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ctctcacagtctccatcctccctggctgtgtcagcaggagagaggtcaccatgagctgc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tcctcaggtggcggtggctggtggtgggtgggtggcggcggatctgacattgag
                                                                 ĎĊ,
                                                                                                                                                                                                                                                                                                 standard;
                                                                                    ZENECA
                                                                 Emery
                                                                                                                                                                                                                                                           (first
                                                                                    LTD.
                                                                                                     97GB-0009421
                                                                                                                        98WO-GB01294
                                                                                                                                                                                                                                                                                                 DNA;
                                                                 SC;
                                                                                                                                                                                                                                                           entry)
                                                                                                                                                                                                                                                                                                 2019
                                                                                                                                                                                                                                        R6
                                                                                                                                                                                                                                                                                                ВP
                                                                                                                                                                                                                                        DNA
                                                                                                                                                                                                                                                                                                                                                                 747
                                                                                         of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     423
                                                                                                                                                                                                                                                                                                                                                                                    783
                                                                                                                                                                                                                                                                                                                                                                                                      720
                                                                                                                                                                                                                                                                                                                                                                                                                                            660
                                                                                                                                                                                                                                                                                                                                                                                                                                                              663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          366
```

```
δÃ
                                       В
                                                                  Q,
                                                                                              Вþ
                                                                                                                     Qγ.
                                                                                                                                                 Д
                                                                                                                                                                            Qy
                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                    Qγ
                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                            QΥ
                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                  ρy
                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                          δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 630; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cell-targeting group (I) and a heterologous prodrug converting enzyme (II), and (B) is directed to leave the cell for selective localisation at a cell surface antigen (Ag) recognised by (I). Delivery of (A) to a target site, then administration of (III) is used for targeted release of cytotoxic drug, specifically for treating cancer but also inflammation such as rheumatoid arthritis. In situ generation of the targeting antibody increases selectivity, reducing side effects at normal tissue. The method is applicable to any antibody-directed enzyme prodrug therapy system.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This sequence is used in a method for obtaining a novel gene (A) which expresses, in cells of a mammal, a conjugate (B) of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 14; Page 77; 100pp;
        721
                                       715
                                                                                              655
                                                                                                                          109
                                                                                                                                                      595
                                                                                                                                                                                                           535
                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                   475
                                                                                                                                                                                                                                                                                             42T
                                                                                                                                                                                                                                                                                                                         415
                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                 358
                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                         298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 caggtcaagctgcaggagtcaggggcagaacttgtgaggtcaggggcctcagtcaatttg
99c99999caccaagctggaaatcaaa
                                                    gtgcaggctgaagacctggcagtttattactgcaagcaatcttataatctaccgacgttc
                                                                                           gtccctgatcycttcacaggcagtggatctgggacagatttcactctcaccatcagcagt
                                                                                                                                                                cagaaaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctgga
                                                                                                                                                                                                                         aaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag
                                                                                                                                                                                                                                                                                tcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggacattgag
                                                                                                                                                                                                                                                                                                                                                                                              tactatgaatacgacggctatgctttggactactggggccaaggggaccacggtcaccgtc
                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ctgcacctcagcagcctgacatctgaggacaccatcgtattactgtaatgcagtcatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagagg
                                      gtgcaggctgaagacctggcaatttattactgcaagcaatcttatactcttcggacgttc
                                                                                                                                                                                                           aaatccagtc3gagtctcctcaacagtagaacccgaaagaactacttggcttggtaccag
                                                                                                                                                                                                                                                                 ctctcacagtctccatcctccctggctgtgtcagcaggaggaggaggtcaccatgagctgc
                                                                                                                                                                                                                                                                                                                        tcctcaggtggcggtggctcgggcggtggtggtcgggtggcggatctgacattgag
                                                                                                                                                                                                                                                                                                                                                                              gcctatggttacgacg---atgctatggactactggggccaagggaccacggtcaccgtc
                                                                                                                                                                                                                                                                                                                                                                                                                                       aatgagaagttcaagaacaaggccacactgactgtagacaaatcctccaccacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tcctgcaaggcttctggctacaccttcaccggctactggatacactgggtgaagcagagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   caggtccaactgcagcagcctggggctgaactggtgaagcctggggcttcagtgcagctg
                                                                                                                                                   cagagaccagggcagtctcctaaactgctgatctattgggcatccactaggacatctggg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ВP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      73.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 604 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 548.6; DB 20;
Pred. No. 1.4e-133;
0; Mismatches 114;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                637 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                341 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ω,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          മ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                     540
                                                                                                                                                                                                                                                                                                                         474
                                                                                                                                                                                                                                                                                                                                                     420
                                                                                                                                                                                                                                                                                                                                                                                                                                         357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
                                       774
                                                                                                                          660
                                                                                                                                                      654
                                                                                                                                                                                                                                                                   534
                                                                                                                                                                                                                                                                                               480
                                                                                                                                                                                                                                                                                                                                                                                 414
                                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300
```

덩

775

801

```
밁
                        Ş
                                                   DЪ
                                                                        Qy
                                                                                                    В
                                                                                                                           Š
                                                                                                                                                       밁
                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 630
                                                                                                                                                                                                                                                                                                          This sequence is a used in a method for obtaining a novel gene construct (A) which expresses, in cells of a mammal, a conjugate (B) of a cell-targeting group (I) and a heterologous prodrug-converting enzyme (II), and (B) is directed to leave the cell for selective localisation at a cell surface antigen (Ag) recognised by (I). Delivery of (A) to a target site, then administration of (III) is used for targeted release of cytotoxic drug, specifically for treating cancer but also inflammation such as rheumatoid arthritis. In situ generation of the targeting antibody increases selectivity, reducing side effects at normal tissue.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conjugate; cell targeting; cytotoxic drug; plasmid; fusion protein; prodrug-converting enzyme; cell surface antigen; treatment; cancer; inflammation; rheumatoid arthritis; antibody; prodrug therapy syste
                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New gene construct expressing conjugate of targeting agent and prodrug-converting enzyme - useful for, e.g. targeted production cytotoxic drug in vivo, especially for treatment of cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     W09851787-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Example 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    05-MAY-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     V72064
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (ZENE ) ZENECA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10-MAY-1999
  238
                          181
                                                                            121
                                                                                                      118
                                                                                                                              61
                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                       58
                                                                                                                                                                                 \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4
                                                                                                                                                                                                         630;
            gccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacacagcctac
                                                               cctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatat 180
                                                                                                                  tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagagg 120
                                                                                                                                                                     caggtcaagctgcaggagtcaggggcagaacttgtgaggtcaggggcctcagtcaatttg
aa tgagaagttcaagaacaaggccacactgactgtagacaaatcctccaccacagcctac
                                                                                                                                                      caggtccaactgcagcctggggctgaactggtgaagcctggggcttcagtgcagctg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1999-059700/05
                                                 cctggacaaggccttgagtggattggagggttaatcctagtaccggtcgttctgactac
                                                                                                   tcctgcaaggcttctggctacaccttcaccggctactggatacactgggtgaagcagagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein
                                                                                                                                                                                                                                                                         2025
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Page 81; 100pp; English.
                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Emery SC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first
                                                                                                                                                                                                                                                                         ₿P;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           97GB-0009421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         pNG4/55.1scFv/CPG2 R6/del EcoRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98WO-GB01294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA;
                                                                                                                                                                                                                                                                         440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   entry)
                                                                                                                                                                                                                     73.4%;
                                                                                                                                                                                                                                                                        Ą;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2025
                                                                                                                                                                                                                                                                         604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ₿P
                                                                                                                                                                                                        0;
                                                                                                                                                                                                         Score 548.6; Pred. No. 1.4e
                                                                                                                                                                                                                                                                         G
                                                                                                                                                                                                                                                                         638
                                                                                                                                                                                                                                                                        ç;
                                                                                                                                                                                                                                                                         343
                                                                                                                                                                                                                      .4e-1
                                                                                                                                                                                                                                                                         Η,
                                                                                                                                                                                                                                    BB
                                                                                                                                                                                                          114;
                                                                                                                                                                                                                                                                         0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA
                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                        3
                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               of.
                         240
                                                                                                    177
                                                                                                                                                       117
                                                                                                                                                                                 60
  297
                                                   237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SS
                                                                                                                                                                                                                                                                                                                                                                 of
                                                                                                                                                                                                         1;
```

```
,,
           RESULT
X01651
                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                Chimeric -
Chimeric -
                                                                                                                                                                                                                B7 binding molecule; costimulatory molecule; B7.1; CD80; B7.2; CD86; T cell activation; inhibitor; graft versus host disease; transplant rejection; allograft rejection; autoimmune disease; allergy; therapy; human; bispecific tetravalent antibody; BiTAbB7-24-1G10H6; ss.
                                                                                                                                 CDS
                                                                     sig_peptide
                                                                                                                                                                     Chimeric
                                                                                                                                                                                                                                                                                            Bispecific tetravalent antibody BiTAbB724-IG10H6
W09858965-A2
                               mat_peptide
                                                                                                                                                                                                                                                                                                                      10-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                     X01651
                                                                                                                                                                                                                                                                                                                                                                                                                               775
                                                                                                                                                                                                                                                                                                                                                                                                                                                      721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                           ggcgggggcaccaagctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gtgcaggctgaagacctggcagtttattactgcaagcaatcttataatctaccgacgttc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gtccctgatcycttcacaggcagtggatctgggacagatttcactctcaccatcagcagt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cagaaaccagygcagtctcctaaaagtgctgatctactgggcatccactagggaatctgga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        aaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ctcacccagtotccatcttccctggctgtgtcagcaggagagagatggctatgagctgc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tcctcaggtggaggcggttcaggcggaaggtggctctggcggtggcggatcggacattgag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ctgcacctcagcagcctgacatctgaggacacaaccgtctattactgtaatgcagtcatc
                                                                                                                                                                                                                                                                                                                                                                                                                              ggtggaggcaccaagctcgagatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gtgcaggctgaagacctggcaatttattactgcaagcaatcttatactcttcggacgttc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gtccctgatcgcttcacaggcagtggatctgggacagatttcactctcaccatcagcagt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           aaatccagtcagagtctcctcaacagtagaacccgaaagaactacttggcttggtaccag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ctctcacagtctccatcctccctggctgtgtcagcaggagagaaggtcaccatgagctgc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gcctatggttacgacg---atgctatggactactggggccaagggaccacggtcaccgtc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tactatgaatacgacggctatgctttggactactggggccaagggaccacggtcaccgtc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cagagaccagggcagtctcctaaactgctgatctattgggcatccactaggacatctggg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tcctcaggtgycggtggctcgggtggtgggtcgggtggcggcggatctgacattgag
                                                                                                                                                                                                                                                                                                                                                                     standard;
                                                                                                                                                                      •
                                                                                                                                                                                Mus sp.
                                                                                                                                                                    synthetic.
                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                       /note=
1..72
                                                                                                                                                                                  sapiens
                                  73..1726
                                            note- "pelB signal sequence"
                                                       /*tag=
                                                                                /transl_except= (pos:780..782, aa:Ile)
/transl_except= (pos:967..969, aa:Xaa)
/note= "Xaa= Gln-Leu-Val-Gln-Val-Gln"
                                                                                                                                           Location/Qualifiers
                                                                                                                      /*tag
                                                                                                                                                                                                                                                                                                                                                                      1725
                      ი
                                                           b
                                                                                                                      Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                      747
                                                                                                                                                                                                                                                                                            DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         357
```

```
ρy
                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                    Db
                                                                   δÃ
                                                                                                             밁
                                                                                                                                               Š
                                                                                                                                                                                    뭥
                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 599;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This DNA sequence encodes the bispecific tetravalent antibody BiTAbB7-24-1G10H6 (see w90217) comprising the anti-B7.1 murine monoclonal antibody (MAb) B7-24 VH region joined, via a flexible synthetic linker, to the B7-24 VL region, the human IgG3 hinge region, a helix-turn-helix dimerisation domain, the human IgG3 hinge domain, the anti-B7-2 MAb IG10 VH region, another flexible linker, the IG10 VL region and a hexahistidine tag. The BiTAb has been expressed in Escherichia coli cells. It cross-links,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           has been expressed in Escherichia coli cells. It cross-links, and/or cross-reacts, with the costinulatory molecules B7.1 and B7.2 expressed on the membrane of professional antigen-presenting cells, leading to the inhibition of antigen-specific T cell activation. The invention relates to such B7-binding molecules, methods for their production, and their use for treating or preventing diseases of the immune system, in particular graft rejection, graft versus
                                                                                                                                                                                                                                                            1198
                                                                                                                                                                                                                                                                                                                                                                                                          1078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1018
                                                                                                                                                                                    1258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bosman A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 1725 BP; 424 A; 439 C; 468 G; 394 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             host disease, allergy and autoimmune diseases (claimed).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 7.1; Fig 15; 182pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New molecules which bind B7.1 and B7.2 - useful to prevent and treat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (INNO-) INNOGENETICS NV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               immune
                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                               121
 481
                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              μ
                                                                                                                                                                                                                                                                                                                                                                                                                            cctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatat 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           caggtcaagctgcaggagtcaggggcagaacttgtgaggtcagggggcctcagtcaatttg 60
                                                                                                                                                                                                                                                                              aacccgaagttcgagggcaaggccacattgactgtagacaaatcctccagcacagcctac 1197
                                                                                                                                                                                                                                                                                                                                                   gccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                      aatggaaagagccttgagtggattggaattattgatccctactatggtggtactagctac 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacaçagg 120
aaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag 540
                                ctcactcagtctccatcatctctggctgtgtctgcaggagaagaggtcactatgacctgt
                                                     ctcacccagtctccatcttccctggctgtgtcagcaggagagaaggtcgctatgagctgc 480
                                                                                                                            tcctcaggtggaggcggttcaggcggaggttggctgtggcggttggcggatcggacattgag 420
                                                                                                                                                                                    tactatggtgactactattattattggactactggggccaagggaccacggtcaccgtc
                                                                                                                                                                                                     tactatgaatacgacggctatgctttggactactggggccaagggaccacggtccccgtc
                                                                                                                                                                                                                                                         atgcagctcgagagcctgacatccgaggactctgcagtctattactgtgcaagattcgcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tcctgcaaggcttctggttactcattcactggccacaacatgaactgggtgaagcagagc 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      caggtgaaactgcagcagtctggacctgagctggagaagcctggcgcttcagtgaagata 1017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1999-105615/09
                                                                                                           tcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggacatcgag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            diseases including allograft rejection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Buyse M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     97EP-0870092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98WO-EP03791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  68.3%;
80.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Lorre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 510.2; DB 20;
Pred. No. 1.3e-123;
0; Mismatches 148;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sablon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 1725;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                           1377
                                                                                                                                                                                    1317
                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                            1257
                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                    Trd Ltd
                                                                                                                                                                                                                                                                                                                                                                                                  XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       XXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PDXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            multiple sclerosis, psoriasis and systemic lupus erythematosus. It also be used to inhibit a response to gene therapy vectors or other therapeutic molecules. A single compound can bind to both CD40 and (expressed at low level by professional antigen presenting cells), resulting in inhibition of T cell activation and inducing T cell and
                                                                                                                  CD86 monoclonal antibody Fun-1 SCFV construct, from an example of the present invention. The present invention describes a soluble molecule that can bind human CD40 antigen and at least human CD86 antigen, which are both present on the surface of lymphocytes. The soluble molecule can be used to induce T cell tolerance and to treat T-cell mediated diseases, specifically to prevent allograft or xenograft transplant
                                                                                                                                                                                                                                                                                                                                         Soluble compound that binds both CD40 and CD86 on surface of lymphocytes - is used to induce T cell tolerance and treat T ce mediated diseases, also recombinant vectors and host cells that
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Anti-CD40; monoclonal antibody; human; lymphocyte; T cell; allograft; xenograft transplant rejection; autoimmune disearheumatoid arthritis; multiple sclerosis; psoriasis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          V10378 standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1438
                                                                                                                                                                                                                                                                                Example 1; Page 27; 47pp; English.
                                                                                                                                                                                                                                                                                                                       express the compound
                                                                                                                                                                                                                                                                                                                                                                                                                                                              De Boer M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1618
                                                                                                  rejection or treat autoimmune diseases such as rheumatoid arthritis,
                                                                                                                                                                                                                                       The present sequence represents cDNA from a plasmid containing the anti-
                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1998-120789/11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (PANG-) PANGENETICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23-JUL-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23-JUL-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO9803670-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Anti-CD86 monocional antibody Fun-1 ScFv construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ggcgggggcaccaagctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gtgcaggctgaagacctggcagtttattactgcaagcaatcttataatctaccgacgttc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gtccctgatcgcttcacaggcagtggatctgggacagatttcactctcaccatcagcagt 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             aagtccagtcaaagtgttttatacagttcaaatcagaagaactacttggcctggtaccaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ggtggaggtaccaagctggaaataaaa 1704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gtacaagctgaggacctggcagtttattactgtcatcaatacctctcctcgtggacgttc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gtccctgatcgcttcacaggcagtggatctgggacagatttttctcttaccatcagcagt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cagaaaccagggcagtctcctaaattgctgatctactgggcatccactagggaatcaggt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cagaaaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctgga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         96US-0022070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              97WO-NL00438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Вν
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  inducing T cell anergy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              disease;
                                                                                                                                                                                                                                                                                                                                                             cell
                                          and CD86
                                                                                 It can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             720
```

Sequence 759 BP; 194 A;

183

Ç

205 G; 177 T; 0 other;

```
Qy
                                                                                                                                                                                                    δÃ
                                                                                                                                                                                      В
                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                      ρy
                                                                                                                                                                                                                                                                                                                                                                                           Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                    밁
                                                                                                                                                                   Ş
                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Ma
Best Loc
Matches
B7 binding molecule; costimulatory molecule; B7.1; CD80; CD86; T cell activation; inhibitor; graft versus host distransplant rejection; allograft rejection; autoimmune distallergy; therapy; human; bispecific tetravalent antibody
                                               Bispecific
                                                                                                       X01652
                                                                  10-MAY-1999
                                                                                                                                                                     712
                                                                                                                                                                                        661
                                                                                                                                                                                                                           601
                                                                                                                                                                                                                                              592
                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                  532
                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                     472
                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                         412
                                                                                                                                                                                                                                                                                                                                                                                              352
                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                   721
                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Match
Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                            tggtatcagcagaaaccagggcagtctcctaaagtgctgatctactgggcatccactagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ccgacgttcggcgggggcaccaagctggaaatcaaa
                                                                                                                                                                                                atgagctgcaaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggct
                                                                                                                                                                                                                                                                                                                                                                                     cctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatat 180
                                                                                                                                                   tggacgttcggtggaggcaccaacctggaaatcaaa
                                                                                                                                                                                      gtcagcagtgtgcaagctgaagacctggcagtttattactgtcatcaatacctctactcg
                                                                                                                                                                                                                           gaatctggtgtccctgatcgcttcacaggcagtggatctgggacacattttactctgacc
                                                                                                                                                                                                                                    gaatctggagtccctgatcgcttcacaggcagtggatctgggacagatttcactctcacc
                                                                                                                                                                                                                                                                                                  atgagctgtaagtccagtcaaagtgttttatacagttcaaatcagaagaactacttggcc
                                                                                                                                                                                                                                                                                                                                      gacatcgagctcacccagtctccatcatctctggctgcgtctgcaggagaaaaggtcact
                                                                                                                                                                                                                                                                                                                                                gtcaccgtctcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcg
                                                                                                                                                                                                                                                                                                                                                                                                             aatggaaagagccttgagtggattggaaatattgatccttactatggtggtactagttac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagagg 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tcctgcaaggcttctggttactcattcactgactacaacatgaactgggtgaagcagagc
                                                                                                       standard;
                                               tetravalent antibody BiTAb1G10-B7-24H6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                       DNA;
                                                                 entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               67.5%;
80.3%;
                                                                                                       ВÞ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 504; DB 19;
Pred. No. 4.4e-122;
0; Mismatches 140;
                                                                                                                                                                    747
                                                                                                                                                   756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                               DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
          080; B7.2;
disease;
disease;
                             В7,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                 591
                                                                                                                                                                                                                                                                                                                    531
                                                                                                                                                                                                                                                                                                                                       480
                                                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                                              411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                           660
                                                                                                                                                                                                                                             651
                                                                                                                                                                                                                                                               600
                                                                                                                                                                                                                                                                                                  540
                                                                                                                                                                                                                                                                                                                                                         471
                                                                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                                                                                                351
                                                                                                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ۲.
```

```
δÃ
                                                                   멍
                                                                                                       QΥ
                                                                                                                                            В
                                                                                                                                                                              Ş
                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                     δõ
                                                                                                                                                                                                                                                                                           멍
                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                δδ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This DNA sequence encodes the bispecific tetravalent antibody

BiTAbG10-B7-24H6 (see W90218) comprising the anti-B7.2 murine

monoclonal antibody (MAD) 1G10 VH region joined, via a flexible

synthetic linker, to the IG10 VL region, the human IgG3 hinge

region, a helix-turn-helix dimerisation domain, the human IgG3

thinge domain, the anti-B7.1 MAD B7-24 VH region, another flexible

linker, the B7-24 VL region and a hexahistidine tag. The BiTAb

has been expressed in Escherichia coli cells. It cross-links,

and/or cross-reacts, with the costimulatory molecules B7.1 and B7.2

expressed on the membrane of professional antigen-presenting cells,

leading to the inhibition of antigen-specific T cell activation.

The invention relates to such B7-binding molecules, methods for

their production, and their use for treating or preventing diseases

of the immune system, in particular graft rejection, graft versus

ky

construction of the system of th
                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 591; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chimeric - 1
Chimeric - 1
Chimeric - 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New molecules which bind B7.1 and B7.2 - useful to immune diseases including allograft rejection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Example
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (INNO-) INNOGENETICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO9858965-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BiTAb1G10-B7-24H6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20-JUN-1997;
   302
                                                                     242
                                                                                                         248
                                                                                                                                              182
                                                                                                                                                                                  188
                                                                                                                                                                                                                     122
                                                                                                                                                                                                                                                       128
                                                                                                                                                                                                                                                                                           62
                                                                                                                                                                                                                                                                                                                              83
                                                                                                                                                                                                                                                                                                                                                                  N
                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                   agggcctggagtggattggatatattgatcctgagagtggtgaaactgaatatgccccga
                                                                                                                                                                                                                                                                                       agctgcaggagtcaggggcagaacttgtgaggtcaggggcctcagtcaatttgtcctgca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1999-105618/09.
gtgactactattatattatggactactggggccaagggaccacggtcaccgtctcctcag
                    aatacgacggctatgctttggactactggggccaagggaccacggtctaccgtctcctcag
                                                                                                                                                                                                                   agagccttgagtggattggaattattgatccctactatggtggtactagctacaacccga
                                                                                                                                                                                                                                                                                                                                                              agctacagcagtctggacctgagctggagaagcctggcgcttcagtgaagatatcctgca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7.1; .Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sp.
no sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           97EP-0870092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98WO-EP03791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ĭ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Lorre
                                                                                                                                                                                                                                                                                                                                                                                                                                                      67.1%;
79.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; 424 C; 453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ×
                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 501.6; I
Pred. No. 2.2e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sablon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>ი</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ᄪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               382 T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                        .2e-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BB
                                                                                                                                                                                                                                                                                                                                                                                                                                     149;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               other;
                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           prevent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and treat
                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                     301
                                                                                                         307
                                                                                                                                            241
                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                       187
                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                            127
                                                                                                                                                                                                                                                                                                                                                                  61
   361
                                                                                                                                                                              247
                                                                                                                                                                                                                                                                                                                                                                                                    67
```

تري 7)

2

```
THE PROPERTY OF THE PROPERTY O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
The invention relates to a method of identifying binding site domains (BSD) that retain the capacity of binding to a predetermined epitope when positioned C-terminal of at least one further domain in a recombinant bior multivalent polypeptide. The method comprises (a) testing a papel of BSD displayed on the surface of a biological display system as part of a fusion protein for binding to a predetermined epitope, where the fusion protein comprises an additional domain positioned N-terminal of the BSD and an amino acid sequence that mediates anchoring of the fusion protein to the surface of the display system; and (b) identifying a BSD that
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            W09925818-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       autoimmune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        04-AUG-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     X77243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              X77243
                                                                                                                                                                                                                                      Disclosure; Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (KUFE/) KUFER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            œ
                                                                                                                                                                                                                                                                                                                                                       1999-338004/28
DB; Y17960.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              agtotocatottocotggotgtgtoagcaggagagaggtogotatgagctgcaaatoca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gtaccaagctcgagatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gcaccaagctggaaatcaaa 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ctgaagacctggcagtttattactgcaagcaatcttataatctaccgacgttcggcgggg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcagcagaaac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gtggaggcggttcaggcggaggtggctctggcggtggcggatcggacatcgagctcactc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ctgaggacctggcagtttattactgtcatcaatacctctcctcgtggacgttcggtggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gtcaaagtgttttatacagttcaaatcagaagaactacttggcctggtaccaacagaaac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                agtctccatcatctctggctgtgtctgcaggagaagaggtcactatgacctgtaagtcca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SCFV
                                                                                                                                                                                                                                                                                                         display
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       site domain;
une disease; s
                                                                                                                                                                                                                                                                               play system capacity to
                                                                                                                                                                                                                                                                                                                                                                                                                          ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first
                                                                                                                                                                                                                                                                                                                                                                                                                          Kufer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     97EP-0120096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98WO-EP07313
                                                                                                                                                                                                                                    6.6; 152pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA;
                                                                                                                                                                                                                                                                                    ಕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; BSD; epitope; fusion protein; therapeutic; scfv-antibody; single-chain Fv; mouse; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                          ּסי
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4-1 encoding
                                                                                                                                                                                                                                                                                 for identification bind an epitope
                                                                                                                                                                                                                                                                                                                                                                                                                          Lutterbuese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ВP
                                                                                                                                                                                                                                    English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA
                                                                                                                                                                                                                                                                                                                                                                                                                          æ
                                                                                                                                                                                                                                                                                                                                                                                                                          Raum
                                                                                                                                                                                                                                                                                                         of
f
                                                                                                                                                                                                                                                                                                       binding
                                                                                                                                                                                                                                                                                                                                                                                                                          Ή
                                                                                                                                                                                                                                                                                                                                                                                                                          Zett1
                                                                                                                                                                                                                                                                                                         site
                                                                                                                                                                                                                                                                                                                                                                                                                          'n
                                                                                                                                                                                                                                                                                                         domains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
```

RESULT X77247 ID X7

X77247

standard;

DNA;

744 ВP 멍

723

ggggaccaagcttgagatcaaa

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Dр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                           В
                                                                      δÃ
                                                                                                     DЪ
                                                                                                                                 Ŋ
                                                                                                                                                                B
                                                                                                                                                                                             80
                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                   Ωy
                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                               ΩV.
                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                            Ϋ́
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          binds to the predetermined epitope. The method is useful to identify bior multivalent polypeptides that comprise antibody binding sites capable of efficiently binding to the corresponding antigen. The polypeptides on antibodies identified by the method are useful therapeutically and diagnostically, for e.g. cancer and autoimmune diseases. ScFv-antibody fragments that bind independently of their position within bifunctional single-chain fusion proteins can be isolated from combinatorial antibody libraries using the new in vitro method. Sequences X77240-248 represent
            726
                                           663
                                                                         669
                                                                                                       603
                                                                                                                                  609
                                                                                                                                                                  543
                                                                                                                                                                                                549
                                                                                                                                                                                                                              483
                                                                                                                                                                                                                                                             489
                                                                                                                                                                                                                                                                                         423
                                                                                                                                                                                                                                                                                                                      429
                                                                                                                                                                                                                                                                                                                                                      363
                                                                                                                                                                                                                                                                                                                                                                                   369
                                                                                                                                                                                                                                                                                                                                                                                                                 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                 309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sequences
                                                                                                                                                                                                                                                                                      gtctccatcttccctggctgtgtcagcaggagagagaggtcgctatgagctgcaaatccag
gggcaccaagctggaaatcaaa
                                                         tgaagacctggcagtttattactgcaagcaatcttataatctaccg---
                                                                                                                     tcgcttcacaggcagtggatctgggacagatttcactctcaccatcagcagtgtgcaggc
                                                                                                                                                                               agggcagtctcctaaagtgctgatctactgggcatccactagggaatctggagtccctga
                                                                                                                                                                                                                                           tcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcagcagaaacc
                                                                                                                                                                                                                                                                                                                                                                   tggaggcggttcaggcggaggtggctctggcggttggcggatcggacattgagctcaccca
                                                                                                                                                                                                                                                                                                                                                                                                                              atacgacggctatgctttggactactgggggccaagggaccacggtctaccgtctcctcagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cagcagcctgacatctgaggacacaaccgtctattactgtaatgcagtcatctactatga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gttcaagggcaaagccacactgactgcagacaagtcctcgtacacagcctatatgcagct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cttccagggcaaggccactgtgactgcagacacatcctccaacacacgcctacctgcacct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gggcctggagtggattggatatattgatcctgagagtggtgaaactgaatatgccccgaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                agcttctggcttcaacattaaagactactatatgcactgggtgaaacagaggcctgaaga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gctcgagcagtctggagctgagctggtaaggcctgggacttcagtgaagatatcctgcaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gctgcaggagtcaggggcagaacttgtgaggtcagggggcctcagtcaatttgtcctgcac
                                           tgaagacctggcagtttattactgtcagaatgattatagttatccgtacacgttcggagg
                                                                                                    tcgcttcacaygcagtggatctggaacagatttcactctcaccatcagcagtgtgcaggc
                                                                                                                                                                  agggcagcctcctaaactgttgatctacggggcatccactagggaatctggggtccctga
                                                                                                                                                                                                                             tcagagtctgttaaacagtggaaatcaaaagaactacttggcctggtaccagcagaaacc
                                                                                                                                                                                                                                                                                                                                                   tggtggtggttctggcggcggctccggtggtggttgttctgagctcgtgatgacaca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cagtagcctgacatctgaggactctgctgtctatttctgtgcaagattgcggaactggga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tggacttgaatgggttggagatattttccctggaagtggtaatgctcactacaatgagaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ggcttctggatacgccttcactaactactggctaggttgggttaagcagaggcctggaca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       62.4%; ilarity 78.8%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             encoding mouse scFV fragments.
                                                                                                                                                                                                                                                                                                                                                                                                                 cgaggctatggactactggggccaagggaccacggtcaccgtctcctcagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  179 A; 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ç,
            747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 466; DB 20;
Pred. No. 3.3e-112;
0; Mismatches 145;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ç;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                            -acgttcggcgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        o identify bi-
sites capable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            71
                                                                                                                                                                  602
                                                                                                                                                                                                809
                                                                                                                                                                                                                                                                                         482
                                                                                                                                                                                                                                                                                                                                                                                   428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           83
                                           722
                                                                         725
                                                                                                     662
                                                                                                                                                                                                                              542
                                                                                                                                                                                                                                                          548
                                                                                                                                                                                                                                                                                                                      488
                                                                                                                                                                                                                                                                                                                                                      422
                                                                                                                                                                                                                                                                                                                                                                                                                 362
                                                                                                                                                                                                                                                                                                                                                                                                                                                 368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             o
F
```

X77247;

```
В
                        Ş
                                                                 В
                                                                                               δÃ
                                                                                                                                    g
                                                                                                                                                                 δÃ
                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                          The invention relates to a method of identifying binding site domains (CC (BSD)) that retain the capacity of binding to a predetermined epitope when CC positioned C-terminal of at least one further domain in a recombinant bick or multivalent polypeptide. The method comprises (a) testing a panel of BSD displayed on the surface of a biological display system as part of a C fusion protein for binding to a predetermined epitope, where the fusion protein comprises an additional domain positioned N-terminal of the BSD and an amino acid sequence that mediates anchoring of the fusion protein to the surface of the display system; and (b) identifying a BSD that binds to the predetermined epitope. The method is useful to identify bicar multivalent polypeptides that comprise antibody binding sites capable of efficiently binding to the corresponding antigen. The polypeptides or antibodies identified by the method are useful therapeutically and cantibodies identified by the method are useful therapeutically and cantibodies identified by the method are useful therapeutically and cantibodies identified by the method are useful therapeutically and cantibodies identified by the method are useful therapeutically and cantibodies identified by the method are useful therapeutically and cantibodies identified by the method are useful therapeutically and cantibody in the proteins can be isolated from combinatorial antibody libraries using the new in vitro method. Sequences X77240-248 represent DNA sequences encoding mouse scFV fragments.
                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 583
                                                                                                                                                                                                                                                                                                                                                          Sequence 744 BP; 183 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Phage display system for identification retaining capacity to bind an epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1999-338004/28
P-PSDB; Y17964.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Binding site domain; BSD; epitope; fusion protein; therapeutic; cancer; autoimmune disease; scFv-antibody; single-chain Fv; mouse; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Borschert K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus sp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mouse scFV fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    04-AUG-1999
                                                               132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (KUFE/) KUFER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO9925818-A1
 192
                                   189
                                                                                                    129
                                                                                                                                    72
                                                                                                                                                                      69
                                                                                                                                                                                                      12
                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                      9
               cttccagggcaaggccactgtgactgcagacacatcctccaacacacgcctacctgcacct 248
                                                                                   gggcctggagtggattggatatattgatcctgagagtggtgaaactgaatatgccccgaa 188
                                                                                                                                                      agcttotggcttcaacattaaagactactatatgcactgggtgaaacagagggcctgaaga 128
gticaagggcaaagccacactgactgcagacaaatcttcgagcacagcctatatgcagct
                                                                                                                                  ggcttctggatacgccttcactaactactggctaggttgggtaaagcagaggcctggaca 131
                                                                                                                                                                                                      gctcgagcagtctggagctgagctggtaaggcctgggacttcagtgaagatatcctgcaa 71
                                                                                                                                                                                                                       gctgcaggagtcaggggcagaacttgtgaggtcaggggcctcagtcaatttgtcctgcac
                                                                 tggacttgagtggattggagatattttccctggaagtggtaatatccactacaatgagaa
                                                                                                                                                                                                                                                                         583;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fig 6.10;
                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kufer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             97EP-0120096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98WO-EP07313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ۵,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5-10 encoding
                                                                                                                                                                                                                                                                                         78
78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       152pp; English.
                                                                                                                                                                                                                                                                                         6.0
                                                                                                                                                                                                                                                                                                                                                          174 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Lutterbuese R,
                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                       Score 462.8;
Pred. No. 2.2
                                                                                                                                                                                                                                                                                                                                                          212
                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA.
                                                                                                                                                                                                                                                                                                                                                          G; 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Raum
                                                                                                                                                                                                                                                                                           .2e-1
                                                                                                                                                                                                                                                                                                                                                         T; 0 other;
                                                                                                                                                                                                                                                                                                         DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       binding
                                                                                                                                                                                                                                                                         147;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ٦,
                                                                                                                                                                                                                                                                                                         20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Zettl
                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         domains
                                                                                                                                                                                                                                                                       12;
                                                                                                                                                                                                                                                                                                         744;
                                                                                                                                                                                                                                                                       Gaps
251
                                                                   191
                                                                                                                                                                                                                                       83
                                                                                                                                                                                                                                                                       2
```

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
Restoring p53-dependent trans-activating activity to cell mutant p53 - by delivering single-chain antibody specific
                                                                                                                                                                                                                                                                                   Single chain antibody; ScFv 421; mouse; p53 protein; regulatory domain; p53 mutant; H273; W248; G281; p53-dependent trans-activating activity; restoration;
                                        WPI; 1998-272140/24.
P-PSDB; W60769.
                                                                                                                                                        27-OCT-1997;
                                                                                                                                                                                   07-MAY-1998
                                                                                                                                                                                                            WO9818825-A1.
                                                                                                                                                                                                                                    Mus sp
                                                                                                                                                                                                                                                             tumour-suppressing activity;
hyper-proliferation; cancer;
                                                                                                                                                                                                                                                                                                                                        DNA of ScFv 421 which binds to mutant p53 proteins
                                                                                                                                                                                                                                                                                                                                                                                                                     V36236 standard; DNA;
                                                                                                                               29-OCT-1996;
                                                                                                      (RHON ) RHONE-POULENC RORER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               249
                                                                                                                                                                                                                                                                                                                                                                                                                                             10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gggcaccaagctggaaatcaaa 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      agggcagtdtcctaaagtgctgatctactgggcatccactagggaatctggagtccctga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gtctccatcttccctggctgtgtcagcaggagagagaggtcgctatgagctgcaaatccag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 atacgacggctatgctttggactactgggggccaagggaccacggtcaccgtctcctcagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cagcagcctgacatctgaggacacaaccgtctattactgtaatgcagtcatctactatga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tgggaccaagcttgagatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tgaagacctgycagtttattactgcaagcaatcttata---atctaccgacgttcggcgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tegetteacaggeagtggatetgggaeagattteacteteaceateageagtgtgeagge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcagcagaaacc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gtctccatcctccctgactgtgacagcaggagagaggtcactatgagctgcaagtccag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tggaggcggttcaggcggaggtggctctggcggtggcggatcggacattgagctcaccca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cagtagcctgacatttgaggactctgctgtctatttctgtgcaagactgaggaactggga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tgaagacctgycagtttattactgtcagaatgattatagttatccgctcacgttcggtgc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      togottcacaggcagtggatctggaacagatttcactctcaccatcagcagtgtgcaggc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         agggcagcctcctaaactgttgatctactgggcatccactagggaatctggggtccctga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tcagagtctgttaaacagtggaaatcaaaagaactacttgacctggtaccagcagaaacc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tggtggtggtf.ctggcggcggctccggtggtggttcttgagctcgtgatgacaca
                                                                        ŗ
                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -chagcctatggactactggggccaagggaccacggtcaccgtctcctcagg
                                                                                                                                 96FR-0013176
                                                                                                                                                         97WO-FR01921
                                                                                                                                                                                                                                                              ctivity; tumour cell;
cancer; re-stenosis;
                                                                              ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     744
                                                                                                                                                                                                                                                                          treatment;
                                                                                                                                                                                                                                                                                                                 oligomerisation
 containing for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      311
```

6

```
멍
                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                               QΥ
                                                                                                                                                                                                                                                                                                      рь
                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δδ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                  밁
                                                              δÃ
                                                                                                                                δÃ
                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present sequence encodes a single chain antibody (ScFv) designated 421. The antibody binds to an epitope present in the C-terminal region of the p53 protein that includes oligomerisation and regulatory domains, specifically between positions 320 and 393. ScFv 421 is directed against p53 mutants, particularly H273, W248 and G281 mutants. When the ScFV is introduced into cells containing a mutant p53 protein, p53-dependent trans-activating activity is restored. ScFV 421 is specific for p53-mutants that have lost tumour-suppressing activity and are present in associated with these mutants (e.g. cancer and re-stenosis) but may also be used in vitro for studying mechanisms of activity of p53 or its mutant and to purify or detect p53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 729 BP; 174 A; 171 C; 207 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mutant,
                                  640
                                                                   661
                                                                                                                                     601
                                                                                                                                                                     520
                                                                                                                                                                                                    541
                                                                                                                                                                                                                                       463
                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                                      343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Sim
   718
                                                                                                    580
                                                                                                                                                                                                                                                                                                       403
                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                        292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              سر
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             caggtcaagctgcaggagtcagggggcagaacttgtgaggtcagggggcctcagtcaatttg
ttcggcgggggcaccaagctggaaatcaaa 747
                                                                                                                                                                                    cagaaaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctgga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ctgcacctcagcagcctgacatctgaggacacaaccgtctattactgtaatgcagtcatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacacacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatat 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            caggtgcagctgcagcagtctggggcagagcttgtgaggtcaggggcctcagtcaagttg
                                                    gtgcaggctgaagacctggcagtttattactgcaagcaa---tcttataatctaccgacg
                                                                                                                  gtccctgatcgcttcacaggcagtggatctgggacagatttcactctcaccatcagcagt 660
                                                                                                                                                                                                                                                       aaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag
                                                                                                                                                                                                                                                                                                  atgacccaaactccactcactttgtcggttaccattggacaaccagcctccatctttgc
                                                                                                                                                                                                                                                                                                                         ctcacccagtctccatcttccctggctgtgtcagcaggagaaaggtcgctatgagctgc
                                                                                                                                                                                                                                                                                                                                                                                      tcctcaggtggaggcggttcaggcggaggtggctctggcggttggcggatcggacattgag
                                                                                                                                                                                                                                                                                                                                                                                                                                                    tactatgaatacgacggctatgctttggactactggggccaagggaccacggtcaccgtc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagagg 120
                               gtggaggctgaggatttgggagtttattattgctggcaaggtacacattctccgctcacg
                                                                                                   gtccctgacaggttcactggcagtggatcagggacagatttcacactgaaaatcaacaga
                                                                                                                                                                 cagaggccaggccagtctccaaagcgcctaatctatctggtgtctaaactggactctgga
                                                                                                                                                                                                                                     aagtcaagtcagagcctcttgga---tagtgatggaaagacatatttgaattggttgtta
                                                                                                                                                                                                                                                                                                                                                                    tcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggatgttttg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ctgcagctcagcagcctggcatctgaggacactgccgtctattattgtaat-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cctgaacagggcctggagtggattggattgatcctgagaatggtgatactgaatat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>ن</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity 79.: 94; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    particularly for treatment of tumours
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Page

    ttttacggggatgctttggactattggggccaagggaccacggtcaccgtc

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61.7%;
79.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 460.8; DB 19; Length
Pred. No. 7.3e-111;
0; Mismatches 132; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                177 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                   717
                                                                                                    639
                                                                                                                                                                     579
                                                                                                                                                                                                    600
                                                                                                                                                                                                                                     519
                                                                                                                                                                                                                                                                      540
                                                                                                                                                                                                                                                                                                       462
                                                                                                                                                                                                                                                                                                                                       480
                                                                                                                                                                                                                                                                                                                                                                      402
                                                                                                                                                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                                                                                                                                                                      342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
```

δÕ 멍 γ

61 10 .

caggtcaagctgcaggagtcaggggcagaacttgtgaggtcagggggcctcagtcaatttg

Conservative

0;

Mismatches 134;

Indels

24;

Gaps

ω

69 60

caggtgcagc;gcaggagtcaggggcagagcttgtggggtcaggggcctcagtcaagttg

tcctgcacagottctggcttcaacattaaagactactatatgcactgggtgaaacagagg 120

```
RESULT 11
T86234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                            Claimed variants of protein p53 have at least part of the coligomerisation domain deleted and replaced by a leucine zipper domain. The mutants preferably also have at least part of the p53 transactivation domain (amino acids 1-74) deleted and replaced by the transactivating domain (TD) from herpes simplex virus viral protein vP16 (amino acids 411-490) or by a protein domain able to bind selectively to a transactivator, especially a single-chain antibody variable domain (SCFV). The present sequence represents the Ncol-NotI fragment of CDNA coding for the anti-p53 single-chain codon cprecise location is not indicated) and no termination codon. The p53 variants are more active and more stable tumour suppressors and apphtosis-inducing agents than wild-type p53 and are active where the wild-type protein is not, i.e. they are not inactivated by dominant negative or oncogenic mutants, nor by other cellular proteins (because the leucine zipper domain prevents formation of
Query Match
Best Local Sim
Matches 592;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Leucine zipper domain; LZD; oligomerisation domain; mutant; mutein; substitution; replacement; transactivation; viral protein VP16; HSV; anti-oncogene; hyperproliferation; cancer; restenosis; ScCV; tumour suppression; apoptosis; single chain antibody variable domain;
                                                                                 Sequence 749 BP; 173 A; 179 C; 221 G; 176 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New p53 variants e.g. with oligomerisation domain replaced by leucine zipper be useful for treating hyper-proliferative disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         06-FEB-1997.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24-NOV-1997 (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             T86234 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                     Example A; Pages 96-97; 133pp; French.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19-JUL-1995;.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17-JUL-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO9704092-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mammalia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Anti-human protein p53 single chain antibody ScFv 421 cDNA fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             700 ttcggtgctggcaccaagctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1997-132633/12
                                                                                                                                                                                                                                                                                                                                                                                                                                                       cancer
                 Similarįty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RHONE
                                                                                                                mixed oligomers).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Consailler
                                                                                                                                                                                                                                                                                                                                                                                                                                                       and restenosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              POULENC RORER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          95FR-0008729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         96WO-FR01111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           entry)
                 61.3%;
78.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ħ
                 Score 457.6; DB Pred. No. 5e-110;
                                DB 18;
                               Length
```

Ψ

```
FFT FFT XXX
                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                  CDS
                                                                   Synthetic
                                                                              Chimeric -
                                                                                                                             tumour
                                                                                                                                     Leucine zipper domain; LZD; oligomerisation domain; mutant; substitution; replacement; transactivation; viral protein VI anti-oncogene; hyperproliferation; cancer; restenosis; ScFv
                                                                                                                                                                                                                                                      T86221 standard;
                                                                                                                                                                                                          24-NOV-1997
                                                                                                                                                                                                                                                                                                                                                         649
                                                                                                                                                                                                                                                                                                                                                                                661
                                                                                                                                                                                                                                                                                                                                                                                                       589
                                                                                                                                                                                                                                                                                                                                                                                                                            601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         130
                                                                                                                                                                                                                                                                                                             709
                                                                                                                                                                                                                                                                                                                                   718
                                                                                                                                                                                                                                                                                                                                                                                                                                                  529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      70
                                                                                                                                                                                                                                                                             12
                                                                                                                                                                                                                                                                                                          gtgcaggctgaagacctggcagtttattactgcaagcaa---tcttataatctaccgacg
                                                                                                                                                                                                                                                                                                                                                                                                                gtccctgatcgcttcacaggcagtggatctgggacagatttcactctcaccatcagcagt 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                            cagaaaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctgġa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ctcacccagtctccatcttccctggctgtgtcagcaggagagaggtcgctatgagctgc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggacattgag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tactatgaatacgacggctatgctttggactactggggccaagggaccacggtcaccgtc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatat 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gtggaggctgaggatttgggagtttattattgctggcaaggtacacattctccgctcacg
                                                                                                                                                                                                                                                                                                                                                                                                    gtccctgacaggttcactggcagtggatcagggacagatttcacactgaaaatcaacaga
                                                                                                                                                                                                                                                                                                                                                                                                                                                  cagaggccaggccagtctccaaagcgcctaatctatctggtgtctaaactggactctgga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             aagtcaagtcagagcctcttgga----tagtgatggaaagacatatttgaattggttgtta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          atgacccaaactccactctgtcggttaccattggacaaccagcctccatctcttgc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ctgcagctcagcagcctggcatctgaggacactgccgtctattattgtaat-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cctgaacagggcctggagtggattggattggattcatcctgagaatggtgatactgaatat
                                                                                                                                                                                  p53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggatgttttg
                                                                                                                          suppression;
                                                                                                                                                                                 protein variant S-325 coding sequence from
                                                                             Homo sapiens.
Herpes simplex
                                                                                                                                                                                                         (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ttttacggggatgctttggactactggggccaagggaccacggtcaccgtc
/*tag= a
/product= S-325
/note= "Open rea
                                            Location/Qualifiers
                                                                                                                                                                                                                                                      CDNA;
                                                                                                                          apoptosis; single chain antibody variable domain.
                                                                                                                                                                                                        entry)
                                                                                                                                                                                                                                                      1611
"Open reading
                                                                               virus
                                                                                                                                                                                                                                                      ₽₽
frame ends
                                                                                                                                                 viral protein VP16;
with
two
                                                                                                                                                                                  PEC176
tandem
                                                                                                                                                  HSV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      129
                                                                                                                                                                                                                                                                                                                                                                                                       648
                                                                                                                                                                                                                                                                                                                                                                                                                                                  588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             249
```

```
В
                                                                                                                                   γQ
                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                   Š
                                               밁
                                                                        Š
                                                                                                                                                                   Вb
                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                           ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CC oligomerisation domain deleted and replaced by a leucine zipper CC domain. The mutants preferably also have at least part of the p53 CC transactivation domain (amino acids 1-74) deleted and replaced by transactivating domain (TD) from herpes simplex virus viral CC protein vP15 (amino acids 411-490) or by a protein domain able to CC bind selectively to a transactivator, especially a single-chain CC antibody variable domain (SCFV). The present sequence encodes CC a specifically claimed p53 variant designated S-325 and comprising CC a SCFV domain, amino acids 75-325 of human wild-type p53 and a CC leucine zipper domain at the C-terminal. The p53 variants are CC agents than wild-type p53 and are active where the wild-type protein CC agents than wild-type p53 and are active where the gative or oncogenic contants, nor by other cellular proteins (because the leucine zipper CC domain prevents formation of inactive mixed oligomers).
                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                              Matches 592;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claimed variants
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 42; Pages 88-90; 133pp; French
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    esp. cancer and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 1611 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New p53 variants e.g. with oligomerisation domain replaced leucine zipper - useful for treating hyper-proliferative di
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bracco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           19-JUL-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17-JUL-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     06-FEB-1997.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               W09704092-A1,
                 361
                                               298
                                                                           301
                                                                                                         247
                                                                                                                                     241
                                                                                                                                                                    187
                                                                                                                                                                                                181
                                                                                                                                                                                                                              127
                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                        67.
                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                     7
                                                                                                                                                                                                                                            cctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatat 180
tcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggacattgag
                                                           tactatgaatacgacggctatgctttggactactggggccaaggggaccacggtcaccgtc
                                                                                                                     ctgcacctcaccagcctgacatctgaggacacaaccgtctattactgtaatgcagtcatc
                                                                                                                                                                   gccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctac
                                                                                                                                                                                  gccccgaacttccagggcaaggccactgtgactgccagacacatcctccaacacagcctac
                                                                                                                                                                                                                              cctgaacagggcctggagtggattggatggattgatcctgagaatggtgatactgaatat
                                                                                                                                                                                                                                                                                                        caggtcaagctgcaggagtcaggggcagaacttgtgaggtcaggggcctcagtcaatttg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1997-132633/12
                                                                                                         ctgcagctcagcagcctggcatctgaggacactgccgtctattattgtaat.
                                                                                                                                                                                                                                                                                        teetgeacagettetggetteaacattaaagaetaetatatgeactgggtgaageagagg
                                                                                                                                                                                                                                                                                                                                                  caggtgcagctgcaggagtcaggggcagagcttgtggggtcaggggcctcagtcaagttg
                                           ------ttttacggggatgctttggactactggggccaagggaccacggtcaccgtc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ļ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RHONE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conseiller
                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           POULENC RORER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           95FR-0008729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     96WO-FR01111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           restenosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              of protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      369 A; 443 C; 458 G; 341
                                                                                                                                                                                                                                                                                                                                                                                                                            61.3%;
78.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                termination
                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               p53 have at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SA
                                                                                                                                                                                                                                                                                                                                                                                                              Score 457.6; DB
Pred. No. 6e-110;
0; Mismatches 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  codons"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               least part of
                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                              134;
                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          disorders,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        bу
                                                                                                                                                                                                                                                                                                                                                                                                              24;
                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                       120
                                                                            360
                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                    99.
                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                          297
                                                                                                                                                                                                                                                                                                                                                                                                               ω
```

ω

```
γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qγ
        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
The invention relates to novel chimaeric, bispecific proteins which comprise: (a) a DNA binding domain and (b) a domain which binds a trans-activator (TA), trans-repressor (TR) or their complexes, which are characteristic of a physiological or physiological state. The novel chimaeric, bispecific proteins allow expression of a therapeutic protein (e.g. diphtheria or Pseudomonas toxins, thymidine kinase, single chain antibodies) to be regulated in response to particular conditions. The Ta- or TR-binding domain may be a antibody such as a single chain
                                                                                                                                                                         Conditional gene expression system triggered by e.g. infection or hyper-proliferation - comprises novel bi:specific proteins having DNA-binding domain and second domain specific for trans-activator (
                                                                                                                                                                                                                                                                                                                                                                              03-OCT-1996
                                                                                                                                                                                                                                                                                                                                                                                                        WO9630512-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            diphtheria; Pseudomonas;
pathogen; HIV Tat; papil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chimaeric; bispecific; DNA binding domain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Coding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       T48000
                                                                                                                                   Claim
                                                                                                                                                                                                                                                                                                                      31-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              hyperproliferation;
                                                                                                                                                                                                                                                                                        (RHON ) RHONE
                                                                                                                                                                                                                                                                                                                                                  29-MAR-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               atgacccaaactccactctgtcggttaccattggacaaccagcctccatctcttgc 468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ctcacccagtctcccatcttccctggctgtgtcagcaggagaaggtcgctatgagctgc 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ttcggcgggggcaccaagctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gtgcaggctgaagacctggcagtttattactgcaagcaa---tcttataatctaccgacg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gtccctgatcgcttcacaggcagtggatctgggacagatttcactctcaccatcagcagt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cagaaaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctgga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       aagtcaagtcagagcctcttgga----tagtgatggaaagacatatttgaattggttgtta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      aaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag
                                                                                                                                                                                                                                    1996-455359/45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ttcggtgctgggaccaagctggagctgaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gtggaggctgaggatttgggagtttattattgctggcaaggtacacattctccgctcacg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gtccctgacaggttcactggcagtggatcagggacagatttcacactgaaaatcaacaga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cagaggccaggccagtctccaaagcgcctaatctatctggtgtctaaactggactctgga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tcctcaggtggaggcggttcaggcggaggtggctctggcggttggcggatcggatgttttg
                                                                                                                                  53;
                                                                                                                                                                                                                                                              ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sequence for single-chain antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       standard;
                                                                                                                                  Page
                                                                                                                                                               for
                                                                                                                                                                                                                                                              Schweighoffer F,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first
                                                                                                                                                                                                                                                                                          POULENC
                                                                                                                                                              gene
                                                                                                                                  44-45;
                                                                                                                                                                                                                                                                                                                      95FR-0003841
                                                                                                                                                                                                                                                                                                                                                  96WO-FR00477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         fic; DNA binding domain; trans; activator; repressor; monas; toxin; thymidine kinase; single chain antibody papilloma virus; E6/E7; Epstein-Barr virus; EBNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 p53; tumour; oligomerisation;
                                                                                                                                                              therapy
                                                                                                                                81pp; French
                                                                                                                                                                                                                                                                                          RORER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ВÞ
                                                                                                                                                                                                                                                                                           SA
                                                                                                                                                                                                                                                              Tocque
                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ៥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     p53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           antibody;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              600
                                                                                                                                                                            õ
```

RESULT X77248

14

B

727

ttcggtgctggcaccaagctggaaattaaa

756

B

X77248

standard; DNA;

744

ВP

```
Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            88888888
             Š
                                           멂
                                                                  δõ
                                                                                                멁
                                                                                                                          δÃ.
                                                                                                                                                        밁
                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                     ğ
                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                 Qγ
                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ν
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  antibody. This sequence encodes such a single chain antibody targeted to the p53 protein. The sequence is constructed from the gene encoding the light and heavy chain variable regions of the antibody produced by hybridoma pAb421. The 340 and 325 bp sequences encoding the heavy and light chain variable regions respectively are amplified by PCR and linked together by a linker "arm". In the protein produced (sequence not given in the specification), amino acids 9-241 represent the linker "h-linker-Vl sequence. The protein also contains an myc epitope tag represented by amino acids 256-266.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
              718
                                           667
                                                                    661
                                                                                                 607
                                                                                                                             601
                                                                                                                                                       547
                                                                                                                                                                                   541
                                                                                                                                                                                                              490
                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                    430
                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                           370
                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                 319
                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                         268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cal Similarity
589; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               caggtcaagctgcaggagtcaggggcagaacttgtgaggtcagggggcctcagtcaatttg
ttcggcgggggcaccaagctggaaatcaaa
                                                        gtccctgatcycttcacaggcagtggatctgggacagatttcactctcaccatcagcagt
                                                                                                                                                                     cagaaaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctgga
                                                                                                                                                                                                                           aaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag
                                                                                                                                                                                                                                                                   atgacccaaactccactcactttgtcggttaccattggacaaccagcctccatctcttgc
                                                                                                                                                                                                                                                                                 tcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggacattgag
                                                                                                                                                                                                                                                                                                                                                                              ctgcacctcagcagcctgacatctgaggacaccaaccgtctattactgtaatgcagtcatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacacaggctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                caggtgcagctgcagcagtctggggcagagcttgtaaggtcaggggcctcagtcaagttg
                                        gtggaggctgaggatttgggagtttattattgctggcaaggtacacattctccgcttacg
                                                                                                gtccctgacaggttcactggcagtggatcagggacagatttcacacttaaaatcaacaga
                                                                                                                                                       cagaggccaggccagtctccaaagcgcctaatctatctggtgtctaaactggactctgga
                                                                                                                                                                                                             aagtcaagtcagagcctcttgga----tagtgatggaaaaacatatttgaattggttgtta
                                                                                                                                                                                                                                                                                                                        tcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggatgttttg
                                                                                                                                                                                                                                                                                                                                                                                                                                      ctgcagctcagcagcctggcatctgaggacactgccgtgtattattgtaat-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cctgaacagggcctggagtggattggattgatcctaagaatggtgatactgaatat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BP; 181 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 452.8; DB 17; Pred. No. 8.9e-109; 0; Mismatches 137;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          G; 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                    717
                                                                                                                             660
                                                                                                                                                        606
                                                                                                                                                                                   600
                                                                                                                                                                                                              546
                                                                                                                                                                                                                                                                   489
                                                                                                                                                                                                                                                                                              480
                                                                                                                                                                                                                                                                                                                           429
                                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                 999
                                                                                                                                                                                                                                        540
                                                                                                                                                                                                                                                                                                                                                                                 369
                                                                                                                                                                                                                                                                                                                                                                                                                                         318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      207
```

X77248

```
밁
                          δÃ
                                                              B
                                                                                          δÃ
                                                                                                                            멍
                                                                                                                                                        δÃ
                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                            The invention relates to a method of identifying binding site domains CC (BSD) that retain the capacity of binding to a predetermined epitope when CC positioned C-terminal of at least one further domain in a recombinant bicompositioned creaminal of at least one further domain in a recombinant bicom positioned C-terminal of the method comprises (a) testing a panel of BSD displayed on the surface of a biological display system as part of a C fusion protein for binding to a predetermined epitope, where the fusion protein comprises an additional domain positioned N-terminal of the BSD and an amino acid sequence that mediates anchoring of the fusion protein to the surface of the display system; and (b) identifying a BSD that coinds to the predetermined epitope. The method is useful to identify bicor englished by the corresponding antigen. The polypeptides or antibodies identified by the method are useful to identify and CC diagnostically, for e.g. cancer and autoimmune diseases. ScFv-antibody fragments that bind independently of their position within bifunctional configure-chain fusion proteins can be isolated from combinatorial antibody libraries using the new in vitro method. Sequences x77240-248 represent DNA sequences encoding mouse scFV fragments.
                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 574
                                                                                                                                                                                                                                                                                                                                     Sequence 744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Phage display system for identification retaining capacity to bind an epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Binding site domain; BSD; epitope; fusion protein; therapeutic; cancer; autoimmune disease; scFv-antibody; single-chain Fv; mouse; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    P-PSDB; Y17965.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1999-338004/28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Borschert K, Kufer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO9925818-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mouse scFV fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   04-AUG-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (KUFE/) KUFER
 192
                                189
                                                              132
                                                                                               129
                                                                                                                                                                                                                                                      Local Similarity hes 574; Conserv
                                                                                                                            72
                                                                                                                                                            69
                                                                                                                                                                                         12
                                                                                                                                                                                                                       9
gttcaagggcaaagccacactgactgcagacaagtcctcgtacacagcctatatgcagct
                cttccagggcaaggcctgtgactgcagacatcatcatcaacacacagcctacctgcacct
                                                                              gggcctggagtggattggatatattgatcctgagagtggtgaaactgaatatgccccgaa 188
                                                                                                                                             agcttctggcttcaacattaaagactactatatgcactgggtgaaacagaaggcctgaaga:128
                                                            tggacttgaatgggttggagatattttccctggaagtggtaatgctcactacaatgagaa
                                                                                                                            ggcttctggatacgccttcactaactactggctaggttgggttaagcagaggcctggaca
                                                                                                                                                                                         gctcgagcagtctggagctgagctggtaaggcctgggacttcagtgaagatatcctgcaa 71
                                                                                                                                                                                                        gctgcaggagtcaggggcagaacttgtgaggtcagggggcctcagtcaatttgtcctgcac
                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fig 7;
                                                                                                                                                                                                                                                                                                                                       BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             97EP-0120096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98WO-EP07313
                                                                                                                                                                                                                                                                                                                                     183 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       152pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ָשׁ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5-13 encoding DNA
                                                                                                                                                                                                                                                                      60.0%;
77.4%;
                                                                                                                                                                                                                                                                                                                                     171 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Lutterbuese
                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                      Score 448.4; DB 20
Pred. No. 1.2e-107;
0; Mismatches 156;
                                                                                                                                                                                                                                                                                                                                       212
                                                                                                                                                                                                                                                                                                                                     <u>ດ</u>;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 70
                                                                                                                                                                                                                                                                                                                                     178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Raum
                                                                                                                                                                                                                                                                                                                                     T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ť,
                                                                                                                                                                                                                                                                                     20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Zettl
                                                                                                                                                                                                                                                      Indels 12;
                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     domains
                                                                                                                                                                                                                                                                                       744;
                                                                                                                                                                                                                                                      Gaps
                                                                                                                            131
                               248
                                                              191
                                                                                                                                                                                                                        68
 251
                                                                                                                                                                                                                                                      2;
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                     misc_feature
                                                                                                                                         misc_feature
                                                                                                                                                                                                           Chimeric -
                                                                                                                                                                                                                    Chimeric
                                                                                                                                                                                                                                                   Recombinant ribosomal inhibitor protein; RIP; clavin; inhibition; ss; protein synthesis; conjugate; Mgr6-clavin; anticancer; antiviral agent
                                                                                                                                                                                                                                                                                                                                V09256;
26-JUN-1997;
                    31-DEC-1997
                                          W09749726-A1
                                                                                                                                                                                                                                         protein synthesis; conjugate;
fusion protein; chimeric.
                                                                                                                                                                                                                                                                                  Nucleotide sequence encoding the Mgr6-clavin immunotoxin
                                                                                                                                                                                                                                                                                                                                                   V09256 standard; cDNA; 1314
                                                                                                                                                                                                                                                                                                                                                                                                        7,23
                                                                                                                                                                                                                                                                                                                                                                                                                              726
                                                                                                                                                                                                                                                                                                                                                                                                                                                     663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   249
                                                                                                                                                                                                                                                                                                                                                                          15
                                                                                                                                                                                                                                                                                                                                                                                                                    gggcaccaagctggaaatcaaa 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tcgcttcacaggcagtggatctgggacagatttcactctcaccatcagcagtgtgcaggc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   agggcagtct::ctaaagtgctgatctactgggcatccactagggaatctggagtccctga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gtctccatcttccctggctgtgtcagcaggagagagaggtcgctatgagctgcaaatccag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             atacgacggctatgctttggactactggggccaagggaccacggtcaccgtctcctcagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ggggaccaagcttgagatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                    tgaagacctggcagtttattactgtcagcaatattatagctatccgtacacgttcggagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                              tgaagacctggcagtttattactgcaagcaatcttata---atctaccgacgttcggcgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        agggcagcct::ctadactgcttatctatggggcatccattagagaatcttgggtccctga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcagcagaaacc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gtctccatcctccctggctatgtcagtaggacagaaggtcactatgagctgcaagtccag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tggaggcggttcaggcggaggtggctctggcggtggcggatcggacattgagctcaccca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tcgattcacaygaagtggatctgggacagacttcactctcaccatcagcagtgtgaaggc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tcagagccttitaaatagtagcaatcaaaagaactatttggcctggtaccagcagaaaca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tggtggtggttctggcggcggctccggtggtggttgttctgagctcgtgatgacaca
                                                                                                                                                                                                          Aspergillus clavatus
                                                                                                                                                                                                                    Mus musculus
                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -cgaggctatggactactggggccaagggaccacggtcaccgtctcctcagg
97WO-EP03359.
                                                                                              /product= "Single Fv
/note= "derived from
861..1314
                                                                                                                                          /product=
108..861
                                                                          /product=
                                                                                                                                /*tag=
                                                                                                                                                               /*tag≖ a
                                                                                                                                                                                   Location/Qualifiers
                                                               "derived
                                                                                                                                σ
                                                                           "Clavin"
                                                                                                                                                     "Mgr6-clavin
                                                                                                                                                                                                                                                                                                                                                                                                           744
                                                               from
                                                                                                           ¥ 0,
                                                               P
                                                                                                                                                     immunotoxin"
                                                               clavatus'
                                                                                                                    Mgr6"
                                                                                                         musculus'
                                                                                                                                                                                                                                                                                                                                                                                                                                                      722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   308
```

```
Š
                               밁
                                                         δÃ
                                                                                             멍
                                                                                                                         δÃ
                                                                                                                                                        밁
                                                                                                                                                                                   Qy
                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                         ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 584;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This nucleotide sequence encodes a fusion protein comrising of the Mgr6 single chain antibody (with the heavy and light chain joined by a linker), fused to the clavin protein. Clavin is an inhibitor protein, and functions by inactivating the ribosomes. Clavin or its conjugates are useful as anticancer and/or antiviral agents. The recombinant ribosomal inhibitor protein (RIP), Mgr6-clavin (a conjugate of clavin) is used as an immunoconjugate, and the complex and clavin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1314 BP; 338 A; 360 C; 359 G; 257 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA encoding Aspergillus clavatus-derived ribosomal inhibitor protein, clavin – useful as an immuno-conjugate and for treatment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1998-077109/07.
P-PSDB; W377738.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27-JUN-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 3; Page 13; 26pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Colnaghi M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (ITUY-) ITAL
                                                                                                                                                                                                                      457
                                                                                                                                                                                                                                                                                    403
                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                             289
                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 caggtcaagctgcaggagtcaggggcagaacttgtgaggtcagggggcctcagtcaatttg
                                                                                                                                                                                                                                                                                                                                                                                                                                                           cctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatat 180
gtccctgatcgcttcacaggcagtggatctgggacagatttcactctcaccatcagcagt 660
                                                                                                           aaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag
                                                                                                                                                                        ctcacccagtctccatcttccctggctgtgtcagcaggagagaggtcgctatgagctgc
                                                                                                                                                                                                                                                                                 ----ggagaatatgattatccttttccttactggggccaagggacctcggtcaccgtc
                                                                                                                                                                                                                                                                                                                                                             gccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacaacacgcctac 240
                                               | cagaaaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctgga 600
                                                                                         agggccagccaaagtgt-----cagtacatctaggtatagttatatgcactggtaccaa
                                                                                                                                                        ctcactcagtctccagcttccttagctgtatctctggggcagaggggccaccatctcatgc
                                                                                                                                                                                                                    tcctcaggtggaggcggttcaggcggaggtggctctggcggttggcggatcgtacatcgag
                                                                                                                                                                                                                                    tcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggacattgag
                                                                                                                                                                                                                                                                                                 tactatgaatacgacggctatgctttggactactggggccaagggaccacggtc
                                                                                                                                                                                                                                                                                                                                               ctgcagctcagcagcctgacatctgaggacactgccgtctattactgtgctaga-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tcctgcacagcttctggcttcaacattaaagacacctatatgcactgggtgaagcagagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagagg 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  caggtgcagctgcaggagtctggggcagagcttgtgaagccaggggcctcagtcaagttg 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           are capable of inhibiting ribosomal activity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               De Santis R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MIN UNIV RICERCA SCI & TECNOLOGICA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             96IT-FI00155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               59.78;
77.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mele A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 446; DB 19;
Pred. No. 5.9e-107;
0; Mismatches 145;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Parente D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 1314;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                         540
                                                                                           630
                                                                                                                                                                                                                      516
                                                                                                                                                                                                                                                                                  456
                                                                                                                                                                                                                                                                                                                360
                                                                                                                                                                                                                                                                                                                                               402
                                                                                                                                                                                                                                                                                                                                                                                                             348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                        576
                                                                                                                                                                                       480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ω
```

```
δÃ
  밁
                   Ş
                                       밁
                                                                              밁
                   718
                                       751
                                                          661
                                                                              691
         ttcggcgggggcaccaagctggaaatcaaa 747
                                                                             gtgcaggctgaagacctggcagtttattactgcaagcaatctt---ataatctaccgacg
                                     gtggaggaggagatactgcaacatattactgtcagcacagttgggagattcctcggacg
ttcggtggagggaccaagctggagctgaaa
 840
                                       810
                                                          717
                                                                              750
```

Search completed: February 17, 2001, 23:01:18 Job time: 16459 sec

THIS PAGE BLANK (USPTO)

```
Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pending_Patents_NA:*

1: /cgn2_6/ptodata/2/p

2: /cgn2_6/ptodata/2/p

3: /cgn2_6/ptodata/2/p

4: /cgn2_6/ptodata/2/p

5: /cgn2_6/ptodata/2/p
                                                                                                                                                                                                                                                                                                                                                                      18:
19:
20:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25:10:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12370408 segs, 2170871038 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-297-181-3
747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 caggtcaagctgcaggagtc.....gcaccaagctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          February 18, 2001, 01:29:16; Search time 2148.34 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                      /cgn2_6/ptodata/2/pna/PCTUS_
/cgn2_6/ptodata/2/pna/US06_C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cgn2_6/ptodata/2/pna/US085/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'cgn2_6/ptodata/2/pna/US086_COMB.seq:*
'cgn2_6/ptodata/2/pna/US087_COMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2_6/ptodata/2/pna/US080_COMB.seq:*
                                                                                                                                                                                                                                             6/ptodata/2/pna/US095B_COMB.seq:*
6/ptodata/2/pna/US095C_COMB.seq:*
6/ptodata/2/pna/US096B_COMB.seq:*
6/ptodata/2/pna/US096B_COMB.seq:*
6/ptodata/2/pna/US090C_COMB.seq:*
6/ptodata/2/pna/US000C_COMB.seq:*
6/ptodata/2/pna/US000C_COMB.seq:*
                                                                                                   6/ptodata/2/pna/US6002_COMB.seq:*
6/ptodata/2/pna/US6003_COMB.seq:*
6/ptodata/2/pna/US6004_COMB.seq:*
6/ptodata/2/pna/US6005_COMB.seq:*
6/ptodata/2/pna/US6005_COMB.seq:*
6/ptodata/2/pna/US6005_COMB.seq:*
6/ptodata/2/pna/US6008_COMB.seq:*
/ptodata/2/pna/US6009_COMB.seq:
/ptodata/2/pna/US6010_COMB.seq:
/ptodata/2/pna/US6011_COMB.seq:
/ptodata/2/pna/US6011_COMB.seq:
/ptodata/2/pna/US6013_COMB.seq:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            )83_COMB.seq:*
)84_COMB.seq:*
)85_COMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (without alignments)
1509.669 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMB.seq:*
```

```
44: /cgn2_6/ptodata/2/pna/US6019_COMB.seq:*
45: /cgn2_6/ptodata/2/pna/US6020_COMB.seq:*
46: /cgn2_6/ptodata/2/pna/US6021_COMB.seq:*
47: /cgn2_6/ptodata/2/pna/US6022_COMB.seq:*
48: /cgn2_6/ptodata/2/pna/US6022_COMB.seq:*
49: /cgn2_6/ptodata/2/pna/US6023_COMB.seq:*
50: /cgn2_6/ptodata/2/pna/US6024_COMB.seq:*
51: /cgn2_6/ptodata/2/pna/PCT_NEW_COMB.seq:*
52: /cgn2_6/ptodata/2/pna/PCT_NEW_COMB.seq:*
53: /cgn2_6/ptodata/2/pna/US07_NEW_COMB.seq:*
54: /cgn2_6/ptodata/2/pna/US07_NEW_COMB.seq:*
55: /cgn2_6/ptodata/2/pna/US07_NEW_COMB.seq:*
56: /cgn2_6/ptodata/2/pna/US07_NEW_COMB.seq:*
56: /cgn2_6/ptodata/2/pna/US07_NEW_COMB.seq:*
56: /cgn2_6/ptodata/2/pna/US07_NEW_COMB.seq:*
56: /cgn2_6/ptodata/2/pna/US07_NEW_COMB.seq:*
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

44 44 5	C 38 38 41	26 27 30 31 31 31 31	110 110 110 110 110 110 110 110 110 110	Result No.
		89.337	5 1 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	Score
				Query Match
726 1460 1460 1460	732 732	2165 756 783 783 771 771 780 792 732 736	1725 1725 1759 1668 749 1679 1679 1679 1679 1679 1679 1679 167	Length
	9 1 6 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5		1186 1186 1186 1186 1187 1188 1188 1188	BU
8-553-497-2 7-989-846B- 8-392-338-1 09-443-213-	09-523-095A -09-523-095A 08-553-497-2 -09-202-000-	-07-990-263- S-09-000-802 S-09-589-870 S-09-526-738 S-09-526-738 S-09-526-738 S-09-523-095 S-09-523-095		ID
27, 18, 18, e 18,	sequence sequence 2 equence 2 equence 2 Sequence Sequence Sequence 3	9, A e 39, A e 39, A	000000000000000000000000000000000000000	Description

ALIGNMENTS

```
CURRENT APPLICATION NUMBER: US/09/297,181
CURRENT FILING DATE: 1999-04-26
EARLIER APPLICATION NUMBER: PCT/FR97/01921
EARLIER FILING DATE: 1997-10-27
EARLIER APPLICATION NUMBER: FR96/13176
EARLIER FILING DATE: 1996-10-29
NUMBER OF SEQ ID NOS: 4
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 3
                           Š
                                                                                   ρy
                                                                                                                                                                                                                                                                                                                       Q
                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                 ğ
                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
    밁
                                                            B
                                                                                                                    В
                                                                                                                                           δÃ
                                                                                                                                                                              g
                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                      망
                                                                                                                                                                                                                                                               Ωy
                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; ORGANISM: Mus musculus FEATURE: SAME/KEY: CDS LOCATION: (1)..(747) US-09-297-181-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 1
US-09-297-181-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 3, Application US/09297181
GENERAL INFORMATION:
APPLICANT: Bracco, Laurent
APPLICANT: Debussche, Laurent
TITLE OF INVENTION: ANTI-P53 SINGLE-CHAIN
FILE REFERENCE: ST96030-US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 747; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH:
    601
                                                                                         541
                                                                                                                      481
                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                 481
                                                                                                                                                                               421
                                                                                                                                                                                                          421
                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ۲
ctgcacctcagcagcctgacatctgaggacacaaccgtctattactgtaatgcagtcatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        caggtcaagctgcaggagtcaggggcagaacttgtgaggtcaggggcctcagtcaatttg
                                                                          cagaaaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctgga
                                                                                                                                  aaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag
                                                                                                                                                                                           tcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggacattgag
                                                                                                                                                                                                                                                                                                           tactatgaatacgacggctatgctttggactactggggccaagggaccacggtcaccgtc
                                                                                                                                                                                                                                                                                                                                                                                                                          gccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cctgaagagggcctggagtggattggatatattgatcctgagagtggtggaaactgaatat 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagagg 120
                                                           cagaaaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctgga
                                                                                                                   aaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag
                                                                                                                                                                            ctcacccagtctccatcttccctggctgtgtcagcaggagagaggtcgctatgagctgc
                                                                                                                                                                                                                                   tcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggacattgag
                                                                                                                                                                                                                                                                                              tactatgaatacgacggctatgctttggactactggggccaagggaccacggtcaccgtc
                                                                                                                                                                                                                                                                                                                                                                                                               gccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatat 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       caggtcaagctgcaggagtcaggggcagaacttgtgaggtcaggggcctcagtcaatttg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tectgcacagettetggetteaacattaaagaetaetatatgcaetgggtgaaacagagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 747; DB 16;
Pred. No. 8.1e-205;
); Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ANTIBODY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FRAGMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       THEIR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                    540
                                                                                                                                                 540
                                                                                                                                                                              480
                                                                                                                                                                                                         480
                                                                                                                                                                                                                                      420
                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

```
밁
                     Ş
                                                  В
                                                                                                      밁
                                                                                                                             Qy
                                                                                                                                                       g.
                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 2
US-09-468-029-57
; Sequence 57, Applicat
; GENERAL INFORMATION:
                                                                         Ş
                                                                                                                                                                                δÃ
                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                        ρy
                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                       QY
                                                                                                                                                                                                                                                                                                                                                                                                                                      ; HYPOTHETICAL:
; ANTI-SENSE:
US-09-468-029-57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION FOR SEQ ID NO: 57
SEQUENCE CHARACTERISTICS:
LENGTH: 1725.base pairs
TYPE: nucleic acid
STRANDENNESS: single
TOPOLOGY: linear
MOLECULE TYPE: 'DNA (genomic
                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                      Matches 599;
 1318
                                                                                                                                                          1138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0
CURRENT APPLICATION DATA:
                                                   1258
                                                                                                       1198
                                                                                                                                                                                                            1078
                                                                                                                                                                                                                                                                1018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: IFILING DATE:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES: 8
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                         361
                                                                                                                                                                                    181
                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                   958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             661
                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                 1 caggtcaagctgcaggagtcaggggcagaacttgtgagggtcagggggcctcagtcaatttg 60
                                                                                                                                                                                                                            cctgaagagggcctggagtggattgggatatattgatcctgagagtggtgaaactgaatat 180
                                                                                                                                                                                                                                                              AATGGAAAGAGCCTTGAGTGGATTGGAATTATTGATCCCTACTATGGTGGTACTAGCTAC 1137
TCCTCAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGACATCGAG
             | teeteaggtggaggeggtteaggeggaaggtggetetggeggtggeggateggacattgag
                                                                                                     ATGCAGCTCGAGACTCCGAGACTCTGCAGTCTATTACTGTGCAAGATTCGCC
                                                                                                                     CAGGTGAAACTGCAGCAGTCTGGACCTGAGCTGGAGAAGCCTGGCGCTTCAGTGAAGATA 1017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ggcgggggcaccaagctggaaatcaaa 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gtgcaggctgaagacctggcagtttattactgcaagcaatcttataatctaccgacgttc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gtgcaggctgaagacctggcagtttattactgcaagcaatcttataatctaccgacgttc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ggcgggggcaccaagctggaaatcaaa 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Application
                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                   No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                68.3%;
80.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B7-Binding molecules diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Release #1.0, Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US/09468029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US/09/468,029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PCT/EP98/03791
                                                                                                                                                                                                                                                                                                                                                                      0; Mismatches 148;
                                                                                                                                                                                                                                                                                                                                                                                  Score 510.2; DB 18; Pred. No. 2.7e-136;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         for treating immune
                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                1725;
                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                         1197
                         420
                                                   1317
                                                                                                       1257
                                                                             360
                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             720
                                                                                                                                                                                                                                                                                                                                                                      0
```

٠

```
망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                   Qy
                                                                                                                                                밁
                                                                                                                                                                      ρy
                                                                                                                                                                                                DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
 밁
                    δÃ
                                                В
                                                                      δÃ
                                                                                                Вþ
                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-235-073-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                  Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                            NUMBER OF SEQ ID NOS: 22

SOFTWARE: FastSEQ for Windows Version SEQ ID NO 10

LENGTH: 759

TYPE: DNA
ORGANISM: human
5-09-235-073-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 10, Applica GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/235,073
CURRENT FILING DATE: 1999-01-21
EARLIER APPLICATION NUMBER: 60/022,070
EARLIER FILING DATE: 1996-07-23
EARLIER APPLICATION NUMBER: PCT/NL97/00438
EARLIER FILING DATE: 1997-07-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: Induction of T cell tolerance TITLE OF INVENTION: CD40/B7 antagonists FILE REFERENCE: 99-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Mark de Boer
APPLICANT: Marcel Theodorus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1558
                                                                                                                                                                                                                                           y Match
Local Similarity
ches 607; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421
                                                 181
                                                                                                 121
                                                                                                                       121
                                                                                                                                                61
                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatat 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   aaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tcctgcacagcttctggcttcaacattmaagactactmtatgcactgggtgaaacagagg 120
                                                                                                                                                                                                            caggicaagcigcaggagicaggggcagaactigigaggicaggggccicagicaaittg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gtgcaggctgaagacctggcagtttattactgcaagcaatcttataatctaccgacgttc 720
atgcagctcaacagcctgacatctgaagactctgcagtctatttctgtgcaagatgggac
                                                aatcagaagttcaagggcaaggccacattgactgtagacaaatcctccagcacagcctac
                                                           gccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacacagcctac
                                                                                               aatggaaagagccttgagtggattggaaatattgatccttactatggtggtactagttac
                                                                                                                                               tcctgcaaggcttctggttactcattcactgactacaacatgaactgggtgaagcagagc 120
                                                                                                                                                                                               caggtccaactgcagtctggacctgagctggagaagcctggcgcttcagtgaagata 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTACAAGCTGAGGACCTGGCAGTTTATTACTGTCATCAATACCTCTCCTCGTGGACGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAGTCCAGTCAAAGTGTTTTATACAGTTCAAATCAGAAGAACTACTTGGCCTGGTACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTCACTCAGTCTCCATCATCTCTGGCTGTGTCTGCAGGAGAAGAGGTCACTATGACCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Application US/09235073
                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                            67.5%;
                                                                                                                                                                                                                                               Score 504; DB 16;
Pred. No. 1.2e-134;
0; Mismatches 140;
                                                          Length
                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                  9;
                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1437
                       300
                                                                       240
                                                                                                                                                                                                                         60
                                                240
                                                                                                 180
                                                                                                                                                                                                                                                  1;
                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
```

```
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-468-029-59
; Sequence 59, Applicat
; GENERAL INFORMATION:
                                                                                                                                   US-09-468-029-59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT
                                                                        Query Match
Best Local S
Mätches 591
                                                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                         APPLICATION NUMBER: UPPLICATION APPLICATION DATA:
APPLICATION NUMBER: PRILING DATE:
                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                         MOLECULE TYPE: : DNA
HYPOTHETICAL: NO
                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       721
                                                                                                                                                                                 TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
  83
                                                                                     Local Similarity
                                                                                                                                                                                                                      LENGTH:
                          N
                                                œ
                                       agctgcaggajtcaggggcagaacttgtgaggtcaggggcctcagtcaatttgtcctgca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     atgagctgcaaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggct 531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cagettetggotteaacattaaagactactatatgeactgggtgaaacagaggeetgaag 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ccgacgttcggcgggggcaccaagctggaaatcaaa 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gtcagcagtgtgcaagctgaagacctggcagtttattactgtcatcaatacctctactcg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 atgagctgtaagtccagtcaaagtgttttatacagttcaaatcagaagaactacttggcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tggacgttcggtggaggcaccaacctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gtcaccgtctcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tataggtacgacggcgggggcttactatgttatggacttctggggccaagggaccacg
                         AGCTACAGCAGTCTGGACCTGAGCTGGAGAAGCCTGGCGCTTCAGTGAAGATATCCTGCA
                                                                        591;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application
                                                                                                                                                                                                                    1668 base pairs
                                                                          Conservative
                                                                                                                                                ö
                                                                                   67.1%;
79.9%;
                                                                                                                                                                      (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                           B7-Binding molecules diseases.
                                                                                                                                                                                                                                                                                                                                                                                                 08
                                                                                                                                                                                                                                                                                                                                                                                                                                                             US/09468029
                                                                                                                                                                                                                                                                                                                                   Release #1.0, Version
                                                                                                                                                                                                                                                                                                            US/09/468,029
                                                                                                                                                                                                                                                                        PCT/EP98/03791
                                                                        0;
                                                                                   Score 501.6;
Pred. No. 8.2
                                                                          Mismatches 149;
                                                                                     .2e-134;
                                                                                                                                                                                                                                                                                                                                                                                                                         for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       756
                                                                                                 DB 18;
                                                                                                                                                                                                                                                                                                                                    #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                        treating immune
                                                                                                                                                                                                                                                                                                                                    (EPO)
                                                                                               Length
                                                                                                  1668;
                                                                        0;
                                                                        Gaps
                                                67
                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               351
                                                                        0;
```

```
Sequence 1, Application US/09297181
GENERAL INFORMATION:
APPLICANT: Bracco, Laurent
ITILE OF INVENTION: ANTI-553 SINGLE-CHAIN ANTIBODY FRAGMENTS AND THEIR USES
FILE REFERENCE: ST96030-US
CURRENT APPLICATION NUMBER: US/09/297,181
CURRENT FILING DATE: 1999-04-26
EARLIER APPLICATION NUMBER: PUT/FR97/01921
EARLIER FILING DATE: 1997-10-27
EARLIER APPLICATION NUMBER: FR96/13176
EARLIER FILING DATE: 1996-10-29
NUMBER OF SEQ ID NOS: 4
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 1
LENGTH: 729
TYPE: DNA
ORGANISM: Mus musculus
                                                                                                                                                                                                                                                     US-09-297-181-1
          FEATURE:
NAME/KEY: CDS
LOCATION: (1)..(729)
-09-297-181-1
                                                                                                                                                                                                                                                                                               722
                                                                                                                                                                                                                                                                                                                                                                                                                                                   548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       122
                                                                                                                                                                                                                                                                                                                                         662
                                                                                                                                                                                                                                                                                                                                                                                    602
                                                                                                                                                                                                                                                                                                                                                                                                                              542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           128
                                                                                                                                                                                                                                                                                            gcaccaagctggaaatcaaa 747
| |||||||| || ||||||
| GTACCAAGCTCGAGATCAAA 741
                                                                                                                                                                                                                                                                                                                                                                                  CAGGGCAGTCTCCTAAATTGCTGATCTACTGGGCATCCACTAGGGAATCAGGTGTCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                          GTCAAAGTGTTTTATACAGTTCAAATCAGAAGAACTACTTGGCCTGGTACCAACAGAAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcagcagaaac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGACATCGAGCTCACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gtggaggcggttcaggcggaggtggctctggcggtggcggatcggacattgagctcaccc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGAGCCTTGAGTGGATTGGAATTATTGATCCCTACTATGGTGGTACTAGCTACAACCCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  agggcctggagtggattggatatattgatcctgagagtggtgaaactgaatatgccccga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGGCTTCTGGTTACTCACTGGCCACAACATGAACTGGGTGAAGCAGAGCAATGGAA 121
                                                                                                                                                                                                                                                                                                                                                               727
                                                                                                                                                                                                                                                                                                                                                                                                        667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           187
                                                                                                                                                                                                                                                                                                                                                                                    661
                                                                                                                                                                                                                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                                                                                                                                                                   607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
      Sequence 46, Application US/08983035
GENERAL INFORMATION:
APPLICANT: CONSEILLER, Emmanuel
APPLICANT: BRACCO, Laurent
TITLE OF INVENTION: P53 PROTEIN VARIANTS AN
TITLE OF INVENTION: USES THEREOF
NUMBER OF SEQUENCES: 59
CORRESPONDENCE ADDRESS:
ADDRESSEE: Rhione-Poulenc Rorer Inc.
STREET: 500 Arcola Road, Mailstop 3C43
CITY: Collegeville
STATE: PA
                                                                                                                                        RESULT 6
US-08-983-035-46
                                                                                                                                                                                                        20
                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                             δã
                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                   멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                               640
                                                                                                                                                                                                                                                                                              109
                                                                                                                                                                                                                                                                                                                    520
                                                                                                                                                                                                                                                                                                                                                               463
                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                                         403
                                                                                                                                                                                     700
                                                                                                                                                                                                                                                    661
                                                                                                                                                                                                                                                                         580
                                                                                                                                                                                                                                                                                                                                        541
                                                                                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                   343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . 61
COUNTRY:
USA
```

QΥ

8 δÃ 밁 δÃ 밁 δÃ 밁 δÃ В δÃ 밁 δÃ 밁 Q 멍 Ş В Q 밁

밁 δÃ 밁

S

AND

THERAPEUTICAL

```
Query Match 61.7
Best Local Similarity 79.2
Matches 594; Conservative
gtgcaggctgaagacctggcagtttattactgcaagcaa---tcttataatctaccgacg
                                                                                                                                                                                                                                                                                                                                                                  atgacccaaactccactctcttgtcggttaccattggacaaccagcctccatctcttgc
                                                                                                                                                                                                                                                                                                                                                                                         tcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggacattgag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        caggtcaagctgcaggagtcaggggcagaacttgtgaggtcaggggcctcagtcaatttg
                                                                                                                                              gtccctgacaggttcactggcagtggatcagggacagatttcacactgaaaatcaacaga
                                                                                                                                                                   gtccctgatcgcttcacaggcagtggatctgggacagatttcactctcaccatcagcagt
                                                                                                                                                                                                                                            cagaaaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctgga
                                                                                                                                                                                                                                                                                             aagtcaagtcagagcctcttgga---tagtgatggaaagacatatttgaattggttgtta
                                                                                                                                                                                                                                                                                                                aaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tactatgaatacgacggctatgctttggactactggggccaaggggaccacggtcaccgtc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ctgcacctcagcagcctgacatctgaggacacaaccgtctattactgtaatgcagtcatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cctgaacagggcctggagtggattggattgatcctgagaatggtgatactgaatat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         caggtgcagctgcagcagtctggggcagagcttgtgaggtcaggggcctcagtcaagttg
                                                                          gtggaggctgaggatttgggagtttattattgctggcaaggtacacattctccgctcacg
                                                                                                                                                                                                                       cagaggccaggccagtctccaaagcgcctaatctatctggtgtctaaactggactctgga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ctgcagctcagcagcctggcatctgaggacactgccgtctattattgtaat-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -----ti:ttacggggatgctttggactattggggccaagggaccacggtcaccgtc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61.7%;
79.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 460.8; DB 16;
Pred. No. 3.6e-122;
0; Mismatches 132;
                                      747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      729;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120
                                                                              699
                                                                                                              717
                                                                                                                                                  639
                                                                                                                                                                                     660
                                                                                                                                                                                                                           579
                                                                                                                                                                                                                                                             900
                                                                                                                                                                                                                                                                                                 519
                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                          462
                                                                                                                                                                                                                                                                                                                                                                                                            480
                                                                                                                                                                                                                                                                                                                                                                                                                                              402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   w
••
```

COMPUTER READABLE FORM: MEDIUM TYPE: Floppy

Floppy disk

```
δÃ
                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                         δõ
                                                                                                                                                                                                                                                                                                          Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                   δõ
                            Ş
                                                                  В
                                                                                                 8
                                                                                                                                      멍
                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                             Ϋ́
                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 61.3
Best Local Similarity 78.9
Matches 592; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR 95/
APPLICATION NUMBER: FR 95/
FILING DATE: 19-JUL-11995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: WO FR9
FILING DATE: 17-JUL-11996
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: (610) 454-3808 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Savitzky Esq., Martin F.
REGISTRATION NUMBER: 29,699
REFERENCE/DOCKET NUMBER: ST950
TELECOMMUNICATION INFORMATION:
TELEPHONE: (610) 454-3816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION DATA:
 472
                                  481
                                                                                                                                      352
                                                                                                                                                                       361
                                                                                                                                                                                                         301
                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                             250
                                                                                                                                                                                                                                                                                               241 ctgcacctcagcagcctgacatctgaggacacaaccgtctattactgtaatgcagtcatc 300
                                                                                                                                                                                                                                                                                                                                                190
                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                  130
                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 caggtcaagctgcaggagtcaggggcagaacttgtgaggtcaggggcctcagtcaatttg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ENGTH:
                                                                                                                                                        tcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggacattgag 420
                aaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag 540
                                                                                                                                                                                                                           tactatgaatacgacggctatgcttttggactactggggccaagggaccacggtcaccgtc 360
                                                                                                                                                                                                                                                                                                                                                                  gccccgaacttccagggcaaggccactgtgactgcagacacatcctccaaccagcctac 240
                                                                                                                                                                                                                                                                                                                                                                                                                                    cctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaaactgaatat 180
                                                                                        TCCTCAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGATGTTTTG
                                                                                                                                                                                                                                                                                                                                              GCCCCGAAGTTCCAGGGCAAGGCCACTATGACTGCAGACACATCCTCCAATACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                  CCTGAACAGGGCCTGGAGTGGATTGGATGGATTGATCCTGAGAATGGTGATACTGAATAT 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGGTGCAGCTGCAGGAGTCAGGGGGCCAGAGCTTGTGGGGGTCAGGGGGCCTCAGTCAAGTTG
AAGTCAAGTCAGAGCCTCTTGGA---TAGTGATGGAAAGACATATTTGAATTGGTTGTTA 528
                                                                    ATGACCCAAACTCCACTCTGTCGGTTACCATTGGACAACCAGCCTCCATCTCTTGC
                                                                                                                                                                                                                                                                             CTGCAGCTCAGCAGCCTGGCATCTGAGGACACTGCCGTCTATTATTGTAAT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 749 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                         -TTTTACGGGGATGCTTTGGACTACTGGGGCCAAGGGACCACGGTCACCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61.3%;
78.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO FR96/01111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FR 95/08729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   us/08/983,035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ST95044-US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 457.6;
Pred. No. 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ed. No. 3.1e-121;
Mismatches 134;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 749;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                      411
                                                                                                                                                                                                       351
                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                              249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                    471
```

ω

Query Match Best Local Similarity Matches 592; Conserv

Conservative

61.3%; 78.9%;

Score 457.6; DB 13; Pred. No. 4.1e-121; 0; Mismatches 134;

Indels

24;

Gaps

ω

DB 13;

Length 1611;

1 caggtcaagclgcaggagtcagggcagaacttgtgaggtcaggggcctcagtcaatttg 60

```
RESULT 7
US-08-983-035-37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
US-08-983-035-37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 37, Application US/08983035 GENERAL INFORMATION:
                                                                                                                                                                             TELEFAX: (619) 454-38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: CONSELLABOR, APPLICANT: BRACCO, Laurent
APPLICANT: BRACCO, Laurent
APPLICANT: OF INVENTION: P53 PROTEIN VARIANTS AND THERAPEUTICAL
                                                                                                                                                                                                             NAME: Savitzky Esq., Martin F.
REGISTRATION WUMBER: 29,699
REFERENCE/DOCKET NUMBER: ST950
TELECOMMUNICATION INFORMATION:
TELEPHONE: (610) 454-3816
                                                                                                                                                                                                                                                                                     ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR 95/08729
FILING DATE: 19-JUL-1995
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: Patentin Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: 'Floppy disk
                                                    FEATURE:
                                                                   MOLECULE TYPE:
                                                                                                                                                          SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
                                                                               TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      718 ttcggcgggggcaccaagctggaaatcaaa 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                601 gtccctgatcgcttcacaggcagtggatctgggacagatttcactctcaccatcagcagt 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         541 cagaaaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctgga
               NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: WO FR96/01111 FILING DATE: 17-JUL-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gtgcaggctgaagacctggcagtttattactgcaagcaa---tcttataatctaccgacg 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAGAGGCCAGGCCAGTCTCCAAAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTCCCTGACAGGTTCACTGGCAGTGGATCAGGGGACAGATTTCACACTGAAAAATCAACAGA 648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTGGAGGCTGAGGATTTGGGAGTTTATTATTGCTGGCAAGGTACACATTCTCCGCTCACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Collegeville
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        E: Rhone-Poulenc Rorer Inc.
500 Arcola Road, Mailstop 3C43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   USA'
               CDS
1.:1608
                                                                                                                                                                                            454-3808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US/08/983,035
                                                                                                                                                                                                                                                       ST95044-US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      588
```

```
RESULT 8
US-08-930-440-4
Sequence 4, Application US/08930480
GENERAL INFORMATION:
APPLICANT: BRACCO, Laurent
APPLICANT: SCHWEIGHOFFER, Fabien
APPLICANT: TOCQUE, Bruno
TITLE OF INVENTION: CONDITIONAL EXPRESSION SY:
NUMBER OF SEQUENCES: 29
CORRESPONDENCE ADDRESS:
ADDRESSEE: Rhome-Poulenc Rorer Inc.
STREET: 500 Arcola Road, Mailstop 3C43
COUNTRY: USA
COUNTRY: USA
ZIP: 19426
COUNTRY: USA
ZIP: 19426
                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              349
                                                                                                                                                                                                                                                                                                                                             706
                                                                                                                                                                                                                                                                                                                                                                       718
                                                                                                                                                                                                                                                                                                                                                                                                      646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGAGGCCAGGCCAGTCTCCAAAAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGA 585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTCGGTGCTGGGACCAAGCTGGAGCTGAAA 735
                                                                                                                                                                                                                                                                                                                                                           ttcggcggggcaccaagctggaaatcaaa 747
                                                                                                                                                                                                                                                                                                                                                                                                    GTGGAGGCTGAGGATTTGGGAGTTTATTATTGCTGGCAAGGTACACATTCTCCGCTCACG
                                                                                                                                                                                                                                                                                                                                                                                                                     GTCCCTGACAGGTTCACTGGCAGTGGATCAGGGACAGATTTCACACTGAAAATCAACAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gtccctgatcgcttcacaggcagtggatctgggacagatttcactctcaccatcagcagt 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                aaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggacattgag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -----TTTTACGGGGATGCTTTGGACTACTGGGGCCAAGGGACCACGGTCACCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tactatgaatacgacggctatgcttttggactactggggccaagggaccacggtcaccgtc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatat 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAGTCAAGTCAGAGCCTCTTGGA---TAGTGATGGAAAGACATATTTGAATTGGTTGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGACCCAAACTCCACTCACTTTGTCGGTTACCATTGGACAACCAGCCTCCATCTCTTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCTCAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGATGTTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCTGAACAGGGCCTGGAGTGGATTGGATGGATCCTGAGAATGGTGATACTGAATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCTGCACAGCTTCTGGCTTCAACATTAAAGACTACTATATGCACTGGGTGAAGCAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                                                 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                              645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; LENGTH: 768 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: double
; TOPOLOGY: linear
; MOLECULE TYPE: CDNA
US-08-930-480-4
                Ş
                                                                       Š
                                                                                                       밁
                                                                                                                                 δÃ
                                                                                                                                                                멂
                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION DATA:
APPLICATION UNMBER: US/08/930,480
FILING DATE:
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION UNMBER: FR 95/03841
FILING DATE: 31-MAR-1995
PRIOR APPLICATION UNMBER: WO PCT/FR96/00477
PRIOR APPLICATION NUMBER: WO PCT/FR96/00477
FILING DATE: 29-MAR-1996
ATTORNEY/AGENT :NFORMATION:
REGISTRATION NUMBER: 35,135
REFERENCE/DOCKET NUMBER: 3595021-US
REFERENCE/DOCKET NUMBER: 3595021-US
TELECHMUNICATION INFORMATION:
TELECHMUNICATION INFORMATION:
TELECHMUNICATION 1544-3808
INFORMATION FOR SEQ ID NO: 4:
SECULEMENT OF SEG ID NO: 4:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 589;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
LENGTH: 768 base pairs
                  601
                                             547
                                                                                                       490
                                                                                                                                    481
                                                                                                                                                                 430
                                                                                                                                                                                            421
                                                                                                                                                                                                                         370
                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                   319
                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                             268
                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                    208
                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                              148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28
 gtccctgatcccttcaccaggcagtggatctgggacagatttcactctcaccatcagcagt
                                                            cagaaaccagogcagtctcctaaagtgctgatctactgggcatccactagggaatctgga 600
                                                                                                                      aaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag
                                                                                                                                                                                      ctcacccagtctccatcttccctggctgtgtcagcaggagagaaggtcgctatgagctgc 480
                                                                                                                                                                                                                                         tcctcaggtgcaggcggttcaggcggaggtggctctggcggttggcggatcggacattgag 420
                                                                                                                                                                                                                                                                                                    tactatgaatacgacggctatgctttggactactggggccaaggggaccacggtc
                                                                                                                                                                                                                                                                                                                                                                                                 gccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                          caggtcaagctgcaggagtcaggggcagaacttgtgaggtcagggggcctcagtcaatttg 60
                                                                                                                                                                 ATGACCCAAACTCCACTCTGTCGGCTTACCATTGGACAACCAGCCTCCATCTCTTGC
                                                                                                                                                                                                                        TCCTCAGGTGCAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGATGTTTTG
                                                                                                                                                                                                                                                                                                                                                             CAGAGGCCAGGCCCAAAAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGA
                                                                                                       AAGTCAAGTCAGAGCCTCTTGGA----TAGTGATGGAAAAACATATTTGAATTGGTTGTTA
                                                                                                                                                                                                                                                                                  ----TTTTACGGGGATGCTTTGGACTATTGGGGCCCAAGGGACCACGGTCACCGTC
                                                                                                                                                                                                                                                                                                                                             CTGCAGCTCAGCAGCCTGGCATCTGAGGACACTGCCGTGTATTATTGTAAT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAGGTGCAGCTGCAGCAGTCTGGGGGCAGAGCTTGTAAGGTCAGGGGGCCTCAGTCAAGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60.6%;
78.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO PCT/FR96/00477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 452.8; DB 13;
Pred. No. 7.6e-120;
0; Mismatches 137;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      · Gaps
```

429

369 360 318 240

267

87

Ψ

```
CURRENT APPLICATION NUMBER: US/08/930,480A
CURRENT FILING DATE: 1998-01-21
PRIOR APPLICATION NUMBER: PCT/FR96/00477
PRIOR FILING DATE: 1996-03-29
PRIOR APPLICATION NUMBER: FR95/03841
PRIOR FILING DATE: 1995-03-31
NUMBER OF SED ID NOS: 32
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 4
LENGTH: 768
TYPE: DNA
ORGANISM: Artificial Sequence
                         ρy
                                                                밁
                                                                                             ρy
                                                                                                                                    밁
                                                                                                                                                               QΥ
                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                   QУ
                                                                                                                                                                                                                                                                                                                                            Вþ
                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; OTHER INFORMATION:
; OTHER INFORMATION:
US-08-930-480A-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 9
US-08-930-480A-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
 Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 4, Application GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: TOCQUE, Bruno TITLE OF INVENTION: COND. FILE REFERENCE: ST95021-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 667
 430
                                421
                                                                   370
                                                                                                                                      319
                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                            148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               727
                                                                                                  361
                                                                                                                                                                      301
                                                                                                                                                                                                        268
                                                                                                                                                                                                                                                                          208
                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                88
                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                            cctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatat 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ttcggcggggcaccaagctggaaatcaaa 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGGAGGCTGAGGATTTGGGAGTTTATTATTGCTGGCAAGGTACACATTCTCCGCTTACG 726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gtgcaggctgaagacctggcagtttattactgcaagcaa---tcttataatctaccgacg 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTCCCTGACAGGTTCACTGGCAGTGGATCAGGGACAGATTTCACACTTAAAAATCAACAGA 666
                                                                                                                                                                                                                    ctgcacctcagcagcctgacatctgaggacacaaccgtctattactgtaatgcagtcatc 300
                                                                                                                                                                                                                                                                                        gccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacacacagcctac 240
                                                                                                                                                                                                                                                                                                                                                                                                                                tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagagg 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   caggitcaagcigcaggagitcaggggcagaactigitgaggitcaggggccitcagitcaaititg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTCGGTGCTGGCACCAAGCTGGAAATTAAA 756
                   ctcacccagtctccatcttccctggctgtgtcagcaggagaaggtcgctatgagctgc
                                                                                                                                                  tactatgaatacgacggctatgctttggactactggggccaagggaccacggtcaccgtc 360
                                                                                                                                                                                                                                                                                                                                         cctgaacagggcctggagtggattggattgatcctaagaatggtgatactgaatat 207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  caggtgcagctgcagcagtctggggcagagcttgtaaggtcaggggcctcagtcaagttg
atgacccaaactccactctgttgggttaccattggacaaccagcctccatctcttgc
                                                                                  tcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggacattgag 420
                                                                                                                                                                                                    ctgcagctcagcagcctggcatctgaggacactgccgtgtattattgtaat--
                                                                                                                                                                                                                                                                      gccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                             tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg 147
                                                              tcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggatgttttg 429
                                                                                                                                ------ttttacggggatgctttggactattggggccaagggaccacggtcaccgtc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        589;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SCHWEIGHOFFER, Fabien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ST95021-US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Description p53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CONDITIONAL EXPRESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60.6%;
78.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US/08930480A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 452.8; DB 13; Pred. No. 7.6e-120; 0; Mismatches 137;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         of Artificial Sequence: ScFv Against
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SYSTEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  87
 489
                                480
                                                                                                                                    369
                                                                                                                                                                                                        318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ω
```

```
APPLICANT: Zhu, Zhenping
APPLICANT: Witte, Larry
FITTE OF INVENTION: Antibodies Specific to KDF
FILE REFERENCE: Sequence Listings 1-34 for 381
CURRENT APPLICATION NUMBER: US/09/559,019
CURRENT FILING DATE: 2000-04-25
NUMBER OF SEQ ID NOS: 34
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 30
LENGTH: 714
TYPE: DNA
ORGANISM: Mouse
US-09-559-019-30
밁
                      Qy
                                                      밁
                                                                              δÃ
                                                                                                             В
                                                                                                                                       δÃ
                                                                                                                                                                      밁
                                                                                                                                                                                                Qγ
                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                               20
                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 10
US-09-559-019-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 30, Application GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           547
346
                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                481
                           361
                                                      294
                                                                                                                                          241
                                                                                                                                                                        181
                                                                                                                                                                                                     181
                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 727
                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 aaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag
            tcctcaggtgyaggcggttcaggcggaggtggctctggcggtggcggatcggacattgag
                                                                                                                             gccccgaactrcccagggcaaggccactgtgactgcagacacatcctccaacacacctac
                                                                                                                                                                                                                                                                                                    tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ttcggtgctggcaccaagctggaaattaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ttcggcgggggcaccaagctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gtccctgatcgcttcaccaggcagtggatctgggaccagatttcactctcaccatcagcagt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cagaaaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctgga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   aagtcaagtcagagcctcttgga---tagtgatggaaaaacatatttgaattggttgtta
                                                                                                                                                                                                                               cctgaacagggcctggagtggattggattggattcctgagcaatggtgattctgattat
                                                                                                                                                                                                                                            cctgaagaggycctggagtggattggatatattgatcctgagagtggtgaaactgaatat
                                                                                                                                                                                                                                                                                                                                               caggtcaagctgcagtctgggggcagagcttgtggggtcaggggcctcagtcaaattg
                                                                                                                                                                                                                                                                                                                                                                caggtcaagctgcaggagtcaggggcagaacttgtgaggtcagggggcctcagtcaatttg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gtggaggctgaggatttgggagtttattattgctggcaaggtacacattctccgcttacg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gtgcaggctgaagacctggcagtttattactgcaagcaa---tcttataatctaccgacg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gtccctgacaggttcactggcagtggatcagggacagatttcacacttaaaatcaacaga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cagaggccaggccagtctccaaagcgcctaatctatctggtgtctaaactggactctgga
                                                                    ctgcagctcagcatctgacatctgaggacactgccgtctattactgtaatgc-----
                                                                                                                                                                      gccccgaagttccagggcaaggccaccatgactgcagactcatcctccaacacagcctac
                                                                                                                                                                                                                                                                                       tcctgcacaacttctggcttcaacattaaagacttctatatgcactgggtgaagcagagg
                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                      atactatggtgactacgaaggctactggggccaagggaccacggtcaccgtc
                                                                                                                                                                                                                                                                                                                                                                                                                        59.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US/09559019
                                                                                                                                                                                                                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                         Score 445.2; DB 21;
Pred. No. 1.2e-117;
0; Mismatches 123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KDR and Uses 381-71
                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                          39;
                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                         420
                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   666
405
                                                      345
                                                                                360
                                                                                                             293
                                                                                                                                          300
                                                                                                                                                                      240
                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                540
                                                                                                                                                                                                                                                                                                                                                                                                          Ψ
```

```
NUMBER OF SEQ ID NOS: 34
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 29
LENGTH: 720
TYPE: DNA
ORGANISM: Mouse
US-09-559-019-29
                            В
QΥ
                                                    δ
                                                                                   밁
                                                                                                               Š
                                                                                                                                             В
                                                                                                                                                                    δÃ
                                                                                                                                                                                                    밁
                                                                                                                                                                                                                              ş
                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                     ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        뮻
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-559-019-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 29, Application US/09559019 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity Matches 587; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Zhu, Zhenping
APPLICANT: Witte, Larry
APPLICANT: Witte, Larry
TITLE OF INVENTION: Antibodies Specific to KDR and Uses Thereof
FILE REFERENCE: Sequence Listings 1-34 for 381-71
CURRENT APPLICATION NUMBER: US/09/559,019
CURRENT FILING DATE: 2000-04-25
  361
                               291
                                                                                      241
                                                                                                                 241
                                                                                                                                             181
                                                                                                                                                                        181
                                                          301
                                                                                                                                                                                                    121
                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                  1 caggtcaagctgcaggagtcaggggcagaacttgtgaggtcagggggcctcagtcaatttg 60
                                                                                ctgcacctcagcagcctgacatctgaggacaccaccgtctattactgtaatgcagtcatc
                                                                                                                                                                                                                cctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatat 180
                                                                                                                                                                                                                                                                           tactatgaatacgacggctatgctttggactactggggccaagggaccacggtcaccgtc 360
                                                                                                                                                           gccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacacacgcctac 240
                                                                                                                                                                                                                                                                                                                 caggicaagcigcagcagtciggggcagagcitgtggggtcaggggccicagtcaaattg 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ttcggcgggggcaccaagctggaaatcaaa 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cagaaaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctgga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       aaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag
tcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggacattgag
                            ------atactatggtgactacgaaggctactggggccaagggaccacggtcaccgtc 345
                                                                                                                                            gccccgaagttccagggcaaggccaccatgactgcagactcatcctccaacacagcctac
                                                                                                                                                                                                   cctgaacagggcctggagtggattggatggattgatcctgagaatggtgattctggttat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ttcggctcggggaccaagctggaaataaaa 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               atggaggctgaagatgctgccacttattactgccagcaaaggagtagttacccattcacg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gtccctgctcgcttcagtggcagtggatctgggacctcttactctctcacaatcagccga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cagaagccaggcacttctcccaaactctggatttatagcacatccaacctggcttctgga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        agtgccagctcaagtgt---------aagttacatgcactggttccag
                                                                                                                                                                                                                                                          tcctgcacaacttctggcttcaacattaaagacttctatatgcactgggtgaagcagagg 120
                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                      59.4%;
78.3%;
                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                          Score 443.6; DB 21;
Pred. No. 3.3e-117;
0; Mismatches 124;
                                                                                                                                                                                                                                                                                                                                                                            Indels 39;
                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                    180
                                                                                     293
                                                                                                                 300
                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                          ü
```

```
RESULT 12
US-09-364-088-15
; Sequence 15, Applicatic
; Sequenal INFORMATION:
; GENERAL INFORMATION:
; APPLICANT: Yashwani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                            TELEFAX: (617)742-7414
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                   FILING DATE:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 09/
FILING DATE: 07-JUNE-1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/
FILING DATE: 07-JUNE-1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                       NAME: Remillard, Jane E.
REGISTATION NUMBER: 38,872
REFERENCE/DOCKET NUMBER: MX:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617,227-7400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Yashwant M. Deo, et al.
TITLE OF INVENTION: THERAPEUTIC COMPOUNDS COMPRISED
TITLE OF INVENTION: OF ANTI-FC RECEPTOR ANTIBODIES
NUMBER OF SEQUENCES: 16
                                                                                             SEQUENCE CHARACTERISTICS:
LENGTH: 1679 base pairs
                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: Patentin Release #1.0, CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/364,08
                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
              MOLECULE TYPE: FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
ADDRESSEE: LAHIVE & COCKFIELD, LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      661 gtgcaggctguagacctggcagtttattactgcaagcaa---tcttataatctaccgacg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  346
                                                TOPOLOGY:
                                                           STRANDEDNESS: single
NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gtccctgatcgcttcacaggcagtggatctgggacagatttcactctcaccatcagcagt 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ttcggctcggggaccaagctggaaataaaa 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ttcggcgggggcaccaagctggaaatcaaa 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 atggaggctgagatgctgccacttattactgccagcaaaggagtagttacccattcacg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cagaaaccagggcagtctcctaaaagtgctgatctactgggcatccactagggaatctgga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cagaagccaggcacttctcccaaactctggatttatagcacatccaacctggcttctgga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 agtgccagctcaagtgt---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ctcactcagtctccagcaatcatgtctgcatctccaggggagaaggtcaccataacctgc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tcctcaggtggaggcggttcaggcggaggtggctctggcggttggcggatcggacatcgag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                02109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Boston
                                                                            nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application US/09364088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28 State Street,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                USA
                               CDNA
                                                                                                                                                                                                                                                                                                                                                                     US/09/364,088
                                                                                                                                                                                                                                                                                                                       09/188,082
                                                                                                                                                                                                                                                                        08/484,172
                                                                                                                                                                                           MXI-043CP2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24th Floor
                                                                                                                                                                                                                                                                                                                                                                                                   Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ---aagttacatgcactggttccag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  405
```

```
RESULT 13
US-09-523-279-15
Sequence 15, Application US/09523279
GENERAL INFORMATION:
APPLICANT: Yashwant M. Deo et al.
TITLE OF INVENTION: THERAPEUTIC COMPOUNDS CONTITLE OF INVENTION: BINDING AGENTS
FILE REFERENCE: MXI-043CP3
CURRENT APPLICATION NUMBER: US/09/523,279
CURRENT ETLING DATE: 200-03-10
PRIOR APPLICATION NUMBER: 09/364,088
PRIOR FILING DATE: 1999-07-30
                                                                                                                                                                                                                                                                                                                                                                                                                   δõ
                                                                                                                                                                                      밁
                                                                                                                                                                                                          Š
                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                       DЬ
                                                                                                                                                                                                                                                                                         ρ
                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                  멍
                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; LOCATION: US-09-364-088-15
                                                                                                                                                밁
                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 580
                                                                                                                                                                                                                               1416
                                                                                                                                                                                                                                                                        1356
                                                                                                                                                                                                                                                                                                                 1317
                                                                                                                                                                                                                                                                                                                                                                                                  1197
                                                                                                                                                                                                                                                                                                                                                                                                                                         1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     245
                                                                                                                                                                                                                                                                                                                                    485
                                                                                                                                                                                                                                                                                                                                                                            425
                                                                                                                                                                                                                                                                                                                                                                                                                    365
                                                                                                                                                                                                                                                                                                                                                                                                                                                              305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 atgaatacgacggctatgctttggactactggggccaagggaccacggtctacct
                                                                                                                                                                                       AGGCTGAAGATGCTGCCACTTATTACTGCCAGCAACGGAGTAGTTACCCACTCACGTTCG
                                                                                                                                                                                                  aggctgaagacctggcagtttattactgcaagcaa---tcttataatctaccgacgttcg
                                                                                                                                                                                                                                                                       aaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctggagtcc
                                                                                                                                                                                                                                                                                                                CCAGCTCAAGTGT------AAGTTACATGCACTGGTTCCAGCAGA
                                                                                                                                                                                                                                                                                                                                 ccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcagcaga
                                                                                                                                                                                                                                                                                                                                                        CCCAGTCTCCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATAACCTGCAGTG
                                                                                                                                                                                                                                                                                                                                                                    CAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCAGAAAATGTGCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                         CTGGGCCGTACTAC-----TTTGACTACTGGGGCCAAGGGACCACGGTCACCGTCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGCTGAGCAGCCTGACATCTGAGGACACTGCCGTCTATTATTGTAATGAGGGGACTCCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           acctcagcagcctgacatctgaggacacaaccgtctattactgtaatgcagtcatctact
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    58.7%;
77.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 438.4; DB 17; Pred. No. 1.5e-115;
                                                                                                                                                                  747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches 136;
                                                                COMPRISES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                ę
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 1679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1022
                                                                                                                                                                                                                                                                                                                                                                             484
                                                                                                                                                                                                                                                                                                                                                                                                                    424
                                                                                                                                                                                                                                                                                                                                                                                                                                         1196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1142
                                                                                                                                                                                         1535
                                                                                                                                                                                                           721
                                                                                                                                                                                                                               1475
                                                                                                                                                                                                                                                   664
                                                                                                                                                                                                                                                                       1415
                                                                                                                                                                                                                                                                                            604
                                                                                                                                                                                                                                                                                                                                    544
                                                                                                                                                                                                                                                                                                                                                         1316
                                                                                                                                                                                                                                                                                                                                                                                                                                                             364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     304
```

```
SEQ ID NO 15
LENGTH: 1679
TYDE: DNA
TYDE: DNA
CORGANISM: Mus musculus
FEATURE:
NAME/KEY: CDS
LOCATION: (11)..(1669)
US-09-523-279-15
              δÃ
                                             밁
                                                                            Qy
                                                                                                                                        ğ
                                                                                                                                                                        밁
                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 09/18
PRIOR FILING DATE: 1998-11-06
PRIOR APPLICATION NUMBER: 08/66
PRIOR FILING DATE: 1996-07-07
PRIOR APPLICATION NUMBER: 08/48
PRIOR FILING DATE: 1995-07-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS: 1
SOFTWARE: PatentIn Ver.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1083
                                                                                                                                                                        1356
                                                                                                                                                                                                                                                                                                                                                              1197
                                                                                                                                                                                                                                                                                                                                                                                                                            1143
                722
                                                                                                                                         605
                                                                                                                                                                                                                                                                  485
                                                                                                                                                                                                                                                                                                                               425
                                                                                                                                                                                                                                                                                                                                                                                             365
                                                                                                                                                                                                                                                                                                                                                                                                                                                           305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5 tcaagctgcaggagtcaggggcagaacttgtgaggtcaggggcctcagtcaatttgtcct
                                                                                                       gcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagaggcctg 124
gcgggggcaccaagctggaaatcaaa 747
                                                             aggctgaagacctggcagtttattactgcaagcaa---tcttataatctaccgacgttcg
                                                                                                                                                                        agccaggcacutctcccaaactctggatttatagcacatccaacctggcttctggagtcc
                                                                                                                                                                                         aaccagggcagtctcctaaagtgctgatctactgggcatccactaggggaatctggagtcc
                                                                                                                                                                                                                                                   ccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcagcaga 544
                                                                                                                                                                                                                                                                                                               cccagtctccatcttccctggctgtgtcagcaggagaaggtcgctatgagctgcaaat 484
                                                                                                                                                                                                                                                                                                                                                                           caggtggaggcggttcaggcggaggtggctctggcggtggcggatcggacattgagctca 424
                                                                                                                                                                                                                                                                                                                                                                                                                                       atgaatacgacggctatgctttggactactggggccaagggaccacggtcaccgtctcct 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      agctgagcag.cctgacatctgaggacactgccgtctattattgtaatgaggggactccga 1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      acctcagcagcctgacatctgaggacacaaccgtctattactgtaatgcagtcatctact
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cgaacttccajggcaaggccactgtgactgcagacacatcctccaacacacgcctacctgc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                aacagggcctggagtggattggattgattcctgagaatggtgatactgaatatgccc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               aagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatatgccc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tcaaactgcagcagtctggggcagaacttgtgaggtcagggacctcagtcaagttgtcct 902
                                             aggotgaagargotgocacttattactgocagcaacggagtagttacccactcacgttcg
                                                                                                                                                                                                                                   ccagctcaagitgt-----
                                                                                                                                                                                                                                                                                             cccagtctccagcaatcatgtctgcatctccaggggagaaggtcaccataacctgcagtg 1316
                                                                                                                                                                                                                                                                                                                                                           caggtggaggcggttcaggcggaggtggctctggcggtggcggatcagaaaatgtgctca
                                                                                                                                                                                                                                                                                                                                                                                                                          ctgggccgtactac-----tttgactactggggccaagggaccacggtcaccgtctcct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cgaagttccagggcaaggccacttttactacagacacatcctccaacacagcctacctgc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gcacagcttctggcttcaacattaaagactcctatatgcactggttgaggcaggggcctg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       580;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1996-07-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    58.7%;
77.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         08/484,172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       09/188,082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 438.4; DB 19; Pred. No. 1.5e-115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches 136;
                                                                                                                                                                                                                                   ---aagttacatgcactggttccagcaga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                1535
                                                                                                           1475
                                                                                                                                                                        1415
                                                                                                                                                                                                                                                                                                                                                              1256
                                                                                                                                                                                                                                                                                                                                                                                                                            1196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               962
```

ω ··

1536

g.tgctggcaccaagctggagctgaaa 1561

```
δÃ
                      Q
                                                          밁
                                                                                        Š
                                                                                                                                В
                                                                                                                                                                Š
                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-188-082-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-188-082-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 15, Applicat GENERAL INFORMATION:
APPLICANT: Yashwa
                                                                                                                                                                                                                                                                                                                                                     Matches 580;
                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: (617)227-5941
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 1679 base pair:
                                                            1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELECOMMUNICATION INFORMATION:
TELEPHONE: (617)227-7400
TELEFAX: (617)227-5941
FORMATION FOR SEQ ID NO: 15:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: OF ANTI-FC RECEPTOR ANTIBODIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Chezian Somasundaram
TITLE OF INVENTION: THERAPEUTIC COMPOUNDS COMPRISED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Joel Goldstein
245 acctcagcagcctgacatctgaggacacaaccgtctattactgtaatgcagtcatctact 304
                                                                                                185
                                                                                                                                                                                                                                                                               843
                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                         65
                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REGISTRATION NUMBER: 35,430 REFERENCE/DOCKET NUMBER: MX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                  5 tcmagctgcaggagtcaggggcagaacttgtgaggtcagggggcctcagtcaatttgtcct 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
                                                          CGAAGTTCCAGGGCAAGGCCACTTTTACTACAGACACATCCTCCAACACACAGCCTACCTGC
                                                                                                                                                                                                                            gcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagaggcctg 124
                                                                                                                                                   aagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatatgccc 184
                                                                             cgaacttccagggcaaggccactgtgactgcagacacatcctccaacacacagcctacctgc 244
                                                                                                                                AACAGGGCCTGGAGTGGATTGGATGGATTGATCCTGAGAATGGTGATACTGAATATGCCC
                                                                                                                                                                                                       GCACAGCTTCTGGCTTCAACATTAAAGACTCCTATATGCACTGGTTGAGGCAGGGGCCTG
                                                                                                                                                                                                                                                                             TCAAACTGCAGCAGTCTGGGGCAGAACTTGTGAGGTCAGGGACCTCAGTCAAGTTGTCCT 902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                H: 1679 base pairs
nucleic acid
DEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       02109-1875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Boston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Application US/09188082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60 State Street, Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Robert Graziano
                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Yashwant M. Deo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LAHIVE & COCKFIELD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Beth E.
                                                                                                                                                                                                                                                                                                                                                                    58.7%;
77.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US/09/188,082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          08/661,052
                                                                                                                                                                                                                                                                                                                                                     ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MXI-043CP
                                                                                                                                                                                                                                                                                                                                                   Score 438.4; DB 55;
Pred. No. 1.5e-115;
0; Mismatches 136;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #1.25
                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                     Length 1679;
                                                                                                                                                                                                                                                                                                                                                     30;
                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                1022
                                                                                                                                                                                                         962
                                                                                                                                                                                                                                                                                                                                                     ω
--
```

```
B
                           δã
                                                                                                                                 ; ANTI-SENSE: NO US-09-468-029-67.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-468-029-67
                                                         Best Local Similarity Matches 566; Conserv
                                                                        Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 67, Applications:
                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                            MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/468,029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1536
                                                                                                                                                             MOLECULE TYPE:
HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                             FILING DATE:
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1197
                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1143 CTGGGCCGTACTAC -----TTTGACTACTGGGGCCAAGGGACCACGGTCACCGTCTCCT 1196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1083 AGCTGAGCAGCCTGACATCTGAGGACACTGCCGTCTATTATTGTAATGAGGGGACTCCGA 1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         365
67
                                                                                                                                                                                            TOPOLOGY:
                                                                                                                                                                                                        STRANDEDNESS:
                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                        TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
               1 caggicaagcigcaggagtcaggggcagaactigtgaggtcaggggcctcagicaatitg 60
                                                                                                                                                                                                                                         ENGTH:
CAGGTGCAGCTACAGCAGTCTGGACCTGAGCTGGAGAAGCCTGGCGCTTCAGTGAAGATA 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gcgggggcaccaagctggaaatcaaa 747
| | ||||||||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             atgaatacgacggctatgctttggactactggggccaaggggaccacggtcaccgtctcct 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGCTGGCACCAAGCTGGAGCTGAAA 1561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ctgatcgcttcacaggcagtggatctggggacagatttcactctcaccatcagcagtgtgc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCAGAAAATGTGCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         caggtggaggcggttcaggcggaggtggctctggcggtggcggatcggacattgagctca 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGGCTGAAGATGCTGCCACTTATTACTGCCAGCAACGGAGTAGTTACCCCACTCACGTTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  aggctgaagacctggcagtttattactgcaagcaa---tcttataatctaccgacgttcg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGCTCGCTTCAGTGGCAGTGGATCTGGGACCTCTTACTCTCTCACAATCAGCCGAATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCCAGTCTCCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATAACCTGCAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCAGCTCAAGTGT - -
                                                                                                                                                                                                                                       804 hase pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/09468029
                                                          Conservative
                                                                                                                                                                                            linear
                                                                                                                                                                  Ö
                                                                                                                                                                             DNA (genomic)
                                                                                                                                                                                                          single
                                                                        58.3%;
75.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              B7-Binding molecules for treating immune diseases.
                                                                                                                                                                                                                                                                                                  PCT/EP98/03791
                                                                                                                                                                                                                                                                                                                                               US/09/468,029
                                                                                                                                                                                                                                                                   67:
                                                         Score 435.4; I
Pred. No. 8.1e.
0; Mismatches
                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ---- AAGTTACATGCACTGGTTCCAGCAGA
                                                                                                                                                                                                                                                                                                                                                                           Version
                                                         6.4; DB 18;
8.1e-115;
ches 151;
                                                                                                                                                                                                                                                                                                                                                                         #1.30 (EPO)
                                                          Indels
                                                                                      Length
                                                                                        804;
                                                          30;
                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          604
                                                          ۲
```

ÿ.

```
Ş
                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                                                                        δÃ
 밁
                                            Š
                                                            밁
                                                                          δÃ
                                                                                                        Š
                                                                                                                                                                                                                  Db
                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                              밁
               Š
                              В
                                                                                                                                                                                                                                                                             757
                               697
                                             661
                                                            637
                                                                           601
                                                                                           577
                                                                                                        541
                                                                                                                        517
                                                                                                                                       481
                                                                                                                                                      457
                                                                                                                                                                     421
                                                                                                                                                                                     427
                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                               721
                                                                                                                                                                                             361 tcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggacattgag 420
                                                                                                                                                                                                                  367 TACTATGGTGACTACTATTATATTATGGACTACTGGGGCCAAGGGACCACGGTCACCGTC
                            ctcacccagtctccatcttccctggctgtgtcagcaggagagaggtgctatgagctgc 480
tactatgaatacgacggctatgctttggactactggggccaagggaccacggtcaccgtc
                                                                                                                        AAGTCCAGTCAAAGTGTTTTATACAGTTCAAATCAGAAGAACTACTTGGCCTGGTACCAA 576
                                                                                                                                                      CTCACTCAGTCTCCATCATCTCTGGCTGTGTCTGCAGGAGAAGAGGTCACTATGACCTGT 516
                                                                                                                                                                                     TCCTCA-----GGCGGTGGCGGATCTGACATCGAG
                                                                                          CAGAAACCAGGGCAGTCTCCTAAATTGCTGATCTACTGGGCATCCACTAGGGAATCAGGT
                                                                                          636
                                                                                                                                                                                     456
                                                                                                                                                                                                                  426
                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                           186
                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                 366
                                                                                                                                                                                                                                                               300
```

Search completed: February 18, 2001, 01:29:24 Job time: 18122 sec

THIS PAGE BLANK (USPTO)

```
Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           442.4
438.4
                    333033575.64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Issued_Patents_NA:*
1: /cgn2_6/ptodata/2
2: /cgn2_6/ptodata/2
3: /cgn2_6/ptodata/2
4: /cgn2_6/ptodata/2
5: /cgn2_6/ptodata/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query
  Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-297-181-3
747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            280836 seqs, 80580151 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   February 17, 2001, 22:59:21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GenCore version Copyright (c) 1993 - 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            caggtcaagctgcaggagtc.....gcaccaagctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /cgn2_6/ptodata/2/ina/5A_COMB.seq:*
/cgn2_6/ptodata/2/ina/5B_COMB.seq:*
/cgn2_6/ptodata/2/ina/6COMB.seq:*
/cgn2_6/ptodata/2/ina/PCTUS_COMB.seq:*
/cgn2_6/ptodata/2/ina/backfiles1.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                       1610
1670
1670
1670
1756
2165
2165
2165
2165
732
732
732
732
7460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
11460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB
                US-08-553-497A-23

US-08-403-853-15

US-08-403-853-17

US-08-403-163-2

US-08-279-772A-7

US-08-279-772A-7

US-08-235-838-15

US-08-235-838-15

US-08-465-473B-15

US-08-465-473B-15
                                                                                                                                                                                                                                   US-08-553-497A-19

US-08-553-497A-25

US-08-553-497A-21

US-08-553-497A-27

US-08-392-338A-18

US-09-166-750-18

US-09-166-093-18

US-09-166-093-18

US-09-166-094-18

US-09-166-094-18

US-09-166-094-18

US-08-800-198-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4.5
Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (without alignments)
1434.713 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Search time 83.91 Seconds (without alignments)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Description
                                                                                                                                                                                                                                       Sequence
Sequence
Sequence
                                       Sequence
                                                        Sequence
                                                                             Sequence
                                                                                                Sequence
                                                                                                                  Sequence
                                                                                                                                       Sequence
                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                      Sequence
                                                                                                                                                          Sequence
                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                       19, Appl
25, Appl
21, Appl
27, Appl
18, Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                            9, 1
17,
8, 1
                                                                                                                                                                                                                  App1
App1
                                                                                                                Appl
Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Appi
                                                                                                                                                                                                                                                                                                                       App
                                                                         ρ
δõ
                                       멍
```

45	44	43	42	41	40	39	3 8	37	36	35	34	ω G	32	31	30	29
293.2	297.8	298.6	300	303.4	304.6	307.2	309.8	309.8	310.4	310.4	310.8	310.8	310.8	310.8	321.4	321.4
39.3	39.9	40.0	40.2	40.6	40.8	41.1	41.5	41.5	41.6	41.6	41.6	41.6	41.6	41.6	43.0	43.0
858	717	940	1443	1706	913	342	748	748	1098	1095	2233	2233	2012	2012	836	836
ω	N	ب	N	N	ν	ω	N	ب	w	ω	N	ь	N	Ь	ω	N
US-08-564-164A-1	US-08-553-497A-17	US-08-353-400-24	US-08-403-853-19	US-08-860-174A-11	US-08-661-052-13	US-08-929-856-65	US-08-465-473B-4	US-08-235-838-4	US-08-875-811-54	US-08-875-811-52	US-08-465-473B-6	US-08-235-838-6	US-08-465-473B-13	US-08-235-838-13	US-08-279-307-1	US-08-933-616-1
Sequence 1, Appli	Sequence 17, Appl	Sequence 24, Appl	Sequence 19, Appl	11,			Sequence 4, Appli	Sequence 4, Appli	Sequence 54, Appl		Sequence 6, Appli	Sequence 6, Appli	Sequence 13, Appl	Sequence 13, Appl	Sequence 1, Appli	Sequence 1, Appli

## ALIGNMENTS

```
TOPOLOGY: 11; MOLECULE TYPE: US-08-652-507-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 1
US-08-652-507-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1, Application US/08652507 Patent No. 5876691 CENERAL INFORMATION:
                                                                                                    Best Local Similarity 77.9
Matches 584; Conservative
                                                                                                                                                 Query .Match -
                                                                                                                                                                                                                                                                                                                      TELEFAX: 703-816-4100 INFORMATION FOR SEQ EDGINO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
NAME: ARTHUR R. CRAWFORD
REGISTRATION NUMBER: 25,327
REFERENCE/DOCKET NUMBER: 117
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE: Nixon & V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES:
                                                          ``-1;caggtcaagctgcaggagtcaggggcagaacttgtgaggtcagggggcctcagtcaatttg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/08/652,507 FILING DATE: 02-Jul-1996 CLASSIFICATION: 530
                                       79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CITY: Arlington
STATE: Virginia
61 tcctgcacago/tctggcttcaacattaaagactactatatgcactgggtgaaacagagg 120
                                                                                                                                                                                                                                                               STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ZIP: 22201-4714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET:
                                                                                                                                                                                                                                                                                                    LENGTH:
                                       CAGGTGAAACIGCAGCAGTCTGGGGCAGAACTTGTGAGGTCAGGGACCTCAGTCAAGTTG
                                                                                                                                                                                                                                                                            nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          E: Nixon & Vanderhye, P.C.
1100 No. 5876691th Glebe Road, 8th Floor
                                                                                                                                                                                                                                                                                                                                                             703-816-4100
                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                           DNA (genomic)
                                                                                                                               59.28;
77.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ANTIBODY AGAINST CARCINOEMBRYONIC ANTIGEN
                                                                                                                                                                                                                                                                                                                                         <u>ب</u>
                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                    117-211
                                                                                                                               Score 442.4; DB 2;
Pred. No. 2.6e-116;
                                                                                                             Mismatches 136;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Version #1.30 (EPO)
                                                                                                           Indels
                                                                                                                                                   Length
                                                                                                                                                   810;
                                                                                                             30;
                                                                                                           Gaps
                                       138
                                                                        60
```

<u>ر ،</u>

ğ

139

```
US-08-661-052-15
                                                                                                                                                                                                              GENERAL INFORMATION:
APPLICANT: Yashwant M. Deo
APPLICANT: Yashwant M. Deo
APPLICANT: Robert Graziano
APPLICANT: Chezian Somasundaram
APPLICANT: Chezian Somasundaram
TITLE OF INVENTION: OF ANTI-FC REC
NUMBER OF SEQUENCES: 16
                                                                                                                                                                                                                                                                                                                                                Sequence 15, Application US/08661052 Patent No. 5837243
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
QPERNTING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT *APPLICATION DATA:
                                                                                                                                                           CORRESPONDENCE ADDRESS:
ADDRESSEE: LAHIVE & COCKFIELD
STREET: 60 State Street, Suit
                                                                                                                                STREET:
CITY: E
STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gtgcaggctgaagacctggcagtttattactgcaagcaa---tcttataatctaccgacg 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaaactgaatat 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cagaaaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctgga 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGGAGGCTGAAGATGCTGCCACTTATTACTGCCAGCAAAGGAGTAGTTACCCACTCACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAGAAGCCAGGCACTTCTCCCAAACTCTGGATTTATAGCACATCCAACCTGGCTTCTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               aaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggctttggtatcag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTCACCCAGTCTCCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATAACCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | tcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggacattgag 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tactatgaatacgacggctatgctttggactactggggccaagggaccacggtcaccgtc 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGTGCCAGCTCAAGTGT------AGTTACATGCACTGGTTCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCCTCAGGTGGAGGCGGTTCAGGCGGAGGTGGCTGGCGGGATCAGAAAATGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCGACTGGGCCGTACTAC -----TTTGACTACTGGGGCCAAGGGACCACGGTCACCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCTGAACAGGGCCTGGAGTGGATTGGATGGATTGATCCTGAGAATGGTGATACTGAATAT
                                                                                                  02109-1875
                                                                                                                                                   Boston
                                                                                                                                  Massachusetts
                                                                                                                 USA
                                                                                                                                                                  Suite
                                                                                                                                                                                                                                 RECEPTOR AN
                                                                                                                                                                  510
                    Version #1.25
                                                                                                                                                                                                                                 ANTIBODIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   198
                    밁
                                                 Š
                                                                                 В
                                                                                                             Š
                                                                                                                                                 밁
                                                                                                                                                                              Š
                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                            γQ
                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                             2
                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-661-052-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELECOMMUNICATION INFORMATION:
TELEPHONE: (617)227-7400
TELEPHONE: (617)227-5941
INFORMATION: TOR SEQ ID NO: 15:
SEQUENCE CHARACTERISTICS:
LENGTH: 1679 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 58.7%;
Best Local Similarity 77.7%;
Matches 580; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/08/6
FILING DATE:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/
FILING DATE: 07-JUNE-1995
ATTORNEY/AGENT INFORMATION:
NAME: AIROLD, Beth E.
REGISTRATION NUMBER: 35,430
                                                                                  1356
                                                                                                                                                                                                                 1257
                                                                                                                                                                                                                                                                                  1197
                                                                                                                                                                                                                                                                                                                                                1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: CDNA FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                            245
                                                                                                                                                                                 485
                                                                                                                                                                                                                                                                                                                365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         G
                                                                                                                                                                                                                                                                             caggtggaggcggttcaggcggaggtggctctggcggtggcggatcggacattgagctca
                                                                                                                                                                                                                                                                                                                                              cgaacttccagggcaaggccactgtgactgcagacacatcctccaacacagcctacctgc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         aaccagggcaqtctcctaaagtgctgatctactgggcatccactagggaatctggagtcc
                                                                                                                                                                     acctcagcagcctgacatctgaggacacaaccgtctattactgtaatgcagtcatctact
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             aagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatatgccc 184
                    CTGCTCGCTTCAGTGGCAGTGGATCTGGGACCTCTTACTCTCACAATCAGCCGAATGG
                                                                                    AGCCAGGCACTTCTCCCAAACTCTGGATTTATAGCACATCCAACCTGGCTTCTGGAGTCC
                                                                                                                                                 CCAGCTCAAGTGT-----
                                                                                                                                                                                                                 CCCAGTCTCCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATAACCTGCAGTG
                                                                                                                                                                                                                                                                                                                                                                                                               AGCTGAGCAGCCTGACATCTGAGGACACTGCCGTCTATTATTGTAATGAGGGGACTCCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AACAGGGCCTGGAGTGGATTGGATTGATCCTGAGAATGGTGATACTGAATATGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCACAGCTTCTGGCTTCAACATTAAAGACTCCTATATGCACTGGTTGAGGCAGGGGCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagaaggcctg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US/08/661,052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      35,430
                                                                                                                                                 -----AAGTTACATGCACTGGTTCCAGCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 438.4; DB 2;
Pred. No. 4.5e-115;
0; Mismatches 136;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
```

δ 밁 δÃ Дb Š

712

661 652 601 592 541

밁

Š

밁

Š В δÃ

481

493

1679; 30;

Gaps

Ψ

364

424 1196 1142

304 1082 244 1022

124

962

1475

664 1415 604 1355

544

484

1316

В

δõ

301

B Š В Ş 밁

319 241 259 181 199 121

밁 δÃ В

433

361 379

421

Š

665 aggctgaagacctggcagtttattactgcaagcaa---tcttataatctaccgacgttcg

721

2

```
RESULT 3
US-08-860-174A-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COCLOSE EP 95307332.7

OCTOBER 16, 1995

OCTOBER 16, 1995

OCTOBER 16, 1996

OCTOBER 1976/03605

FILING DATE: AUGUST 14, 1996

INFORMATION FOR SEQ ID NO: 9:

SEQUENCE CHARACTERISTICS:

LENGTH: 924 base pai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 9, Application Patent No. 5989830
                                                                                                                      LOCATION: 466..510
OTHER INFORMATION: /FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY: linear
MOLECULE TYPE: other nucleic acid
DESCRIPTION: /desc = "cDNA domains with synthetic
DESCRIPTION: linker(s)"
                                                                                                                                                                                                                                                                              OTHER INFORMATION: /product=
FEATURE:
                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/08/860,174A FILING DATE: June 16, 1997 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: A BIFUNCTIONAL OR BIVALENT TITLE OF INVENTION: ANTIBODY FRAGMENT ANALOGUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: VERHOEIJEN, MARPLICANT: WILSON, Steve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1536 GTGCTGGCACCAAGCTGGAGCTGAAA 1561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1476 AGGCTGAAGATGCTGCCACTTATTACTGCCAGCAACGGAGTAGTTACCCCACTCACGTTCG
                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                             IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 722 gcgggggcaccaagctggaaatcaaa 747
                                                                                            NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE: PILLSBURY, MADISON & SUTRO LLP
STREET: 1100 New YORK Avenue, N.W.
STREET: 9th Floor, East Tower
CITY: WASHINGTON, D.C.
NAME/KEY: misc_RNA
LOCATION: 853.885
OTHER INFORMATION:
                                                                       OTHER INFORMATION:
                                                                                                                                                                                                                          OTHER INFORMATION:
                                                                                                                                                                                                                                          NAME/KEY: mat_peptide LOCATION: 106..465
                                                                                                                                                                                                                                                                                                                                                                           CLONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OPERATING SYSTEM: F
SOFTWARE: MS WORD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY: UNITED STATES ZIP: 20005-3918
                                                                                                                                                                                                                                                                                                                   NAME/KEY: sig_peptide LOCATION: 40..105
                                                                                                                                                                                                                                                                                                                                                                         HindIII-EcoRI insert of scFv.4715-myc
                                                                                            mat_peptide
511..852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERHOEIJEN, Martine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VAN DER LOGT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            , Paul James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US/08860174A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WINDOWS 95,
                                                                                                                                                 /product-
                                                                                                                                                                                                                        /product=
 /product=
                                                                       /product=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cornelis Paul Erik
artine Elisa
 "myc-tag"
                                                                                                                                                                                                                                                                                                "pectate lyase"
                                                                                                                                                 "(Gly4Ser)3-linker"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ver. 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOS Text
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1535
```

RESULT 4 US-08-797-689-17

Sequence 17, Applia Patent No. 5876969

Application US/08797689

GENERAL INFORMATION:
APPLICANT: Fleer,
APPLICANT: Fourni
APPLICANT: Guitto
APPLICANT: Jung,

Fleer, Reinhard Fournier, Alain Guitton, Jean-Dominique

```
FEATURE:

NAME/KEY: CDS.

LOCATION: 40..888

OTHER INFORMATION:
US-08-860-174A-9
                        N
                                                                                    δÃ
                                                                                                                                             Š
                                                                                                                                                                                                        δõ
                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
밁
                                                         밁
                                                                                                                   밁
                                                                                                                                                                              밁
                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                            460
                                                                                                                                                                                                                                                                                                                                                                                                                      406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 166
820
                                                                                     661
                                                                                                                   700
                                                                                                                                               601
                                                                                                                                                                            640
                                                                                                                                                                                                        541
                                                                                                                                                                                                                                        580
                                                                                                                                                                                                                                                                     48T
                                                                                                                                                                                                                                                                                                 520
                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                         760
                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
nes 561; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 caggtcaagctgcaggagtcaggggcagaacttgtgaggtcaggggcctcagtcaatttg
                                                                       gtgcaggctgaagacctggcagtttattactgcaagcaatcttataatctaccg---acg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatat 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagagg 120
                                                                                                                               gtccctgatcgcttcaccaggcagtggatctgggacagatttcactctcaccatcagcagt
                                                                                                                                                                                            AAGTCCGGTCAGAGTCTGTTAAACAGTGTAAATCAGAGGAACTACTTGACCTGGTACCAG
                                                                                                                                                                                                                                                       aaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag
                                                                                                                                                                                                                                                                                                                  ctcacccagtctccqtcttccctggctgtgtcagcaggagagaggtcgctatgagctgc
                                                                                                                                                                                                                                                                                                                                                                            TACTATGGTAAAGGC-----TATTTTGACTACTGGGGCCAAGGGACCACGGTCACCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ctgcacctcagcagcctgacatctgaggacacaaccgtctattactgtaatgcagtcatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCTGTGCAACCTCTGGATTCACTTTCAGTAGTTATGCCTTTTCTTGGGTCCGCCAGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGGTGCAGCTGCAGGAGTCAGGGGGGAGACTTAGTGAAGCCTGGAGGGTCCCTGACACTC
              CTCACTCAGTCTCCATTCTCCCTGACTGTGACAGCAGGAGAGAAGGTCACTATGAATTGC
                                                                                                                                                                                                                                                                                                                                                              TCCTCAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGACATCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                       tactatgaatacgacggctatgctttggactactggggccaagggaccacggtcaccgtc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGCAAATGAGCAGTCTGAAGTCTGAGGACACAGCCGTGTATTACTGTGCAAGACATGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCAGACAATGTGAAGGGGGCGCTTCACCATCTCCAGAGACAATGGCAAGAACACCCTGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacacagcctac 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCAGACAAGAGTCTGGAGTGGGTCGCAACCATCAGTAGTACTGATACTTATACCTATTAT
TTCGGAGGGGGGACCAAGCTCGAGATCAAA 849
                                                        GTGCAGGCTGAAGACCTGGCAGTTTATTACTGTCAGAATGATTATACTTATCCGTTCACG
                                                                                                                                                                            CAGAAGCCAGGGCAGCCTCCTAAACTGTTGATCTACTGGGCATCCACTAGGGAATCTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   56.8%; Score 424; DB 2; 74.8%; Pred. No. 4.3e-111; tive 0; Mismatches 180;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /product= "pelB-VH4715-(Gly4Ser)3-VL4715-myc"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                     717
                                                                                                                                                                                                          600
                                                                                                                                                                                                                                                                                                                               480
                                                                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                                                                      459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 225
                                                           819
                                                                                                                   759
                                                                                                                                                                              699
                                                                                                                                                                                                                                        639
                                                                                                                                                                                                                                                                     540
                                                                                                                                                                                                                                                                                                 579
                                                                                                                                                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                            519
```

```
US-08-797-689-17
                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: FR 92/01(
FILING DATE: 31-7AN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/FR93,
AFTILING DATE: 28-7AN-1993
ATTORNEY/AGENT INFORMATION:
NAME: Smith ph.D., Julie K.
REGISTRATION NUMBER: P-38,611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: (610) 454-3808
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 756 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Yeb, Patri
TITLE OF INVENTION: INTITLE OF INVENTION: INTITLE OF INVENTION: ()
TITLE OF INVENTION: ()
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: Word 5.1 (Patentin)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/797,689
FILING DATE: 31-JAN-1997
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE: cDNA FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REGISTRATION NUMBER: P-38,619
REFERENCE/DOCKET NUMBER: ST92006-US
TELECOMMUNICATION INFORMATION:
TELEPHONE: (610) 454-3839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: Macintosh
               +241 ctgcacctcagcagcctgacatctgaggacacaaccgtctattactgtaatgcagtcatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
                                                                  192
                                                                                                 181
                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US 08/200, J. FILING DATE: 28-JUL-1994 FILING DATE: FR 92/01064
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OPERATING SYSTEM: S'SOFTWARE: WOR'D 5.1
                                                                                                                                                                                                    72
                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                     Local Similarity 73.1
nes 559; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY: UP
ZIP: 19426
                                                                                                                                                                                                                                                                    12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET: 500 Arcola CITY: Collegeville
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
                                                                                                                                                                                                                                                                                       1 caggtcaagctgcaggagtcaggggcagaacttgtgagggtcagggggcctcagtcaatttg 60
ATGCAGCTCAGCAGCCTGACCTCTGTGGGGCTCTGCGGTCTATTTCTGTGCAAAAGAGAAC
                                                                AATGGGAAGTTCAAGGGCAAGGCCACACTGACTGCGGACAGATCATCCAGCACAGCCTAC
                                                                                 gccccgaacttccagggcaaggccactgtgactgcagacacactcctccaacacacgcctac 240
                                                                                                                                                   cctgaagagggcctggagtggattgggatatattgatcctgagagtggtgaaactgaatat 180
                                                                                                                                                                                                  TCCTGCAAAGCTTCTGGCTACGCATTCAGTAGGTCTTGGATGAACTGGGTGAAGCAGAGG
                                                                                                                                                                                                                  tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagagg 120
                                                                                                                                                                                                                                                                   CAGGTGCAGCTCGAGCAGTCTGGACCTGAGCTGGAAGCCTGGGGGCCTCAGTGAAGATT 71
                                                                                                                                CCTGGACAGGGTCTTGAGTGGATTGGACGGATTTATCCTGGAGATGGAGATACCAAATAC 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             E: Rhone-Poulenc Rorer Inc 500 Arcola Road, 3C43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Patrice
                                                                                                                                                                                                                                                                                                                                                 53.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CONTAINING SAID POLYPEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         System 7.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NOVEL BIOLOGICALLY ACTIVE POLYPEPTIDES, PREPARATION THEREOF AND PHARMACEUTICAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US 08/256,927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PCT/FR93/00085
                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                 Score 400; DB 2;
Pred. No. 2.5e-104;
0; Mismatches 170;
                                                                                                                                                                                                                                                                                                                                                                Length 756;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPOSITION
                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                131
                               300
                                                              251
311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 5
US-08-263-911-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              355
                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
               TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                     ¥
```

δÃ

망 Ş

밁 Š 밁 В

Š Дb Ş

```
Sequence 6, Application US/08263911 Patent No. 5877291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: Mezes, Peter S
APPLICANT: Gourlie, Brian B
TITLE OF INVENTION: MULTIVALENT SINGLE CHAIN ANTIBODIES
NUMBER OF SEQUENCES: 23
                                                                                       PRIOR APPLICATION DATA
APPLICATION NUMBER: US 07/990,263
FILING DATE: 11-DEC-1992
ATTORNEY,AGENT INFORMATION:
NAME: "Ulmer, Duane C
REGISTRATION NUMBER: 34,941
REFERENCE/DOCKET NUMBER: C-41,014
TELECOMMUNICATION INFORMATION:
TELEPHONE: (517) 636-8104
                                                                                                                                                                                                                                                           COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Ve
CURRENT APPLICATION DATA:
APPLICATION UNMER: US/08/263,911
FILING DATE: '21-JUN-1994
CLASSIFICATION: 530
                                                                          INFORMATION FOR SEQ ID NO:
                                     SEQUENCE CHARACTERISTICS:
LENGTH: 2165 base pairs
                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
ADDRESSEE: Duane C. Ulmer
STREET: P.O.:Box 1967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET: P.O. I
STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             attgagctcacccagtctcccatcttccctggctgtgtcagcaggagagaaggtcgctatg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tctggagtccctgatcgcttcacaggcagtggatctgggacagatttcactctcaccatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATCAACAGANACCAGGGCAATCTCCTAAACTACTGATTTACTGGGCATCCACCCGGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCTGCAAGGCCAGTCAGGATGTG-'------GATACTTCTGTAGCCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   agctgcaaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTCAGTTGACCCAGTCTCCAAATTCCATGTCCACATCAGTAGGAGACAGGGTCAGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                accgtctcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTGGAGTCCCTGATCGCTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCACCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                  TRY: US .
48641-1967
         nucleic acid
                                                                           6:
                                                                                                                                                                                                                                                                                                                                           Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          371
```

US-08-263-911-6

```
RESULT 6
US-08-263-911-8
                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                       δã
                                                                                                                                                                                                                                                                                                                                                                   DЪ
                                                                                                                                                                                                                                                                                                                                                                                             Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                 δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                      밁
                                                 Sequence 8, Application US/08263911
Patent No. 5877291
GENERAL INFORMATION:
APPLICANT: Mezes, Peter S
APPLICANT: GOUTILE, Brian B
TITLE OF INVENTION: MULTIVALENT
NUMBER OF SEQUENCES: 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 534;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1014
                                      CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                    1314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1074
                                                                                                                                                                                                                                                                                                             1374
                                                                                                                                                                                                                                                                                                                                                                                                                         1254
                                                                                                                                                                                                                                                                                                                                        593
                                                                                                                                                                                                                                                                                                                                                                                                                                                    473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        413
                                                                                                                                                                                                                                                                                                                                                                                               533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                954
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                774
STREET:
CITY: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     62
                        ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          taccgacgttcggcgggggcaccaagctggaaatcaa 746
                                                                                                                                                                                                                                                                      cctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagaggc 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               aggtcaagctgcaggagtcaggggcagaacttgtgaggtcaggggcctcagtcaatttgt
                                                                                                                                                                                                    CCCTCACGTTCGGTGCTGGGACCAAGCTGGTGCTGAA 1530
                                                                                                                                                                                                                                                                                                             AATCTGGGGTCCCTGATCGCTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCCCA
                                                                                                                                                                                                                                                                                                                           aatctggagtccctgatcgcttcacaggcagtggatctgggacagatttcactctcacca
                                                                                                                                                                                                                                                                                                                                                                                 ggtatcagcagaaaccagggcagtctccctaaagtgctgatctactgggcatccactaggg;592
                                                                                                                                                                                                                                                                                                                                                                                                                                       tgagctgcaaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggctt 532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATATGGCCTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTCACTAAGCGCAGATGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -----ctactatgaatacgacggctatgctttggactactggggccaagggaccacgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ccccgaacttccagggcaaggccactgtgactgcagacacatcctccaaccaccagcctacc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCTGCAAGGCTTCTGGCTACACCTTCACTGACCATGCAATTCACTGGGTGAAACAGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGGTTCAGTTGCAGCAGTCTGACGCTGAGTTGGTGAAACCTGGGGGCTTCAGTGAAGATTT
                                                                                                                                                                                                                                                         TCAGCAGTGTGAAGACTGAAGACCTGGCAGTTTATTACTGTCAGCAGTATTATAGCTATC
                                                                                                                                                                                                                                                                                                                                                                  GGTACCAGCAGAAACCAGGGCAGTCTCCTAAACTGCTGATTTACTGGGCATCCGCTAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                         TGAGCTGCAAGTCCAGTCAGAGCCTTTTATATAGTGGTAATCAAAAGAACTACTTGGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tcaccgtctcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGAGAGGTTCAAGGGCAAGGCCACACTGACTGCAGACAAATCCTCCAGCACTGCCTACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGAACAGGGCCTGGAATGGATTGGATATTTTCTCCCCGGAAATGATGATTTTAAATACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
Midland
           E: Duane C. Ulmer
P.O. Box 1967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  50.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 375.4;
Pred. No. 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   core 375.4; DB 2; ced. No. 3.3e-97; Mismatches 211;
                                                                 SINGLE
                                                                 CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1073
                                                                                                                                                                                                                                                                                                                                                                                                                       1313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       299
                                                                                                                                                                                                                                                                                                             1433
                                                                                                                                                                                                                                                                                                                                        652
                                                                                                                                                                                                                                                                                                                                                                   1373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                    709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        953
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           893
```

```
δÃ
                                         뭕
                                                                    Ş
                                                                                                                              ğ
                                                                                                                                                                밁
                                                                                                                                                                                          Š
                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                ğ
                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;
US-08-263-911-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 534; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REGISTRATION NUMBER: 34,941
REFERENCE/DOCKET NUMBER: C-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (517) 636-8104
INFORMATION FOR SEQ ID NO: 8:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 21-JUN-1994
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/
FILING DATE: 11-DEC-1992
ATTORNEY/AGENT INFORMATION:
NAME: Ulmer, Duane C
                                          1674
                                                                                                  1494
                                                                                                                                                                                                                                                                                     1434
                                                                                                                                                                                                                                                                                                                                            ZIP: 48641-1967
COMPUTER READABLE FORM:
MEDIUM TYPE: 'Floppy disk
COMPUTER: IBM PC compati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1254 CCTGCAAGGCTTCTGGCTACACCTTCACTGACCATGCAATTCACTGGGTGAAACAGAACC 1313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1194 AGGTTCAGTTGCAGCAGTCTGACGCTGAGTTGGTGAAACCTGGGGCTTCAGTGAAGATTT 1253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION DATA: US. APPLICATION NUMBER: US.
           533
                                                                                                                                                                                                                                                                                                                 242
                                                                                                                                                                                                                                                                                                                                                                                                                                           122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Release #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: nucleic acid STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 2165 base pairs
                                    tgcacctcagcagcctgacatctgaggacacaaaccgtctattactgtaatgcagtcat--
                                                                                                                                                                                                                                                                                                                                                                                                            CTGAACAGGGCCTGGAATGGATTGGATATTTTTCTCCCGGAAATGATGATTTTAAATACA 1373
                                                                                                                                                                                                                                                                                                                                                                                                                           cctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagaggc 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 aggtcaagctgcaggagtcaggggcagaacttgtgaggtcaggggcctcagtcaatttgt 61
ggtatcagcayaaaccagggcagtctccctaaagtgctgatctactgggcatccactaggg
                                                                                                                                                                ATATGGCCTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTCACTAAGCGCAGATGACG 1553
                                                                                                                                                                                                                                                                                     TGCAGCTCAACAGCCTGACATCTGAGGATTCTGCAGTGTATTTCTGTACAAGATCCCTGA 1493
                                                                                                                                                                                         tcaccgtctcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcgg 412
                                                                                                                                                                                                                                                     -----ctactatgaatacgacggctatgctttggactactggggccaagggaccacgg 352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           50.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US/08/263,911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       07/990,263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 375.4;
Pred. No. 3.3e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C-41,014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3.3e-97;
ches 211;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2165;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
```

2

GGTACCAGCAGAAACCAGGGCAGTCTCCTAAAACTGCTGATTTACTGGGCATCCGCTAGGG

592

1613

299

밁

δÃ

20

밁

B δÃ

ω

```
US-08-553-497A-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 19,
                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER: WO PCT/EP95/00978
FILING DATE: 16-MAR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: EP 94104160.0
FILING DATE: 17-MAR-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: EP 94118970.6
ETITIOR DATE: DATE: 1004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Patent No. 5844093
GENERAL INFORMATION:
                                                                                                                                                TELEFAX: 703-243-6410 NFORMATION FOR SEQ ID NO:
                  HYPOTHETICAL:
ANTI-SENSE: 1
                                                                                                                                                                             REGISTRATION NUMBER: 33,302
REFERENCE/DOCKET NUMBER: ME
TELECOMMUNICATION INFORMATION:
TELEPHONE: 703-243-6333
                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/553,497A
FILING DATE: 17-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
ADDRESSEE: MILLEN, WHITE, ZELANO & BRANIGAN, STREET: 2200 CLARENDON BLVD. SUITE 1400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1794 AATCTGGGGTCCCTGATCGCTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCTCCA 1853
                                                                                                                              SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                           FILING DATE: 02-DEC-1994
ATTORNEY/AGENT INFORMATION:
NAME: HAMLET-KING, DIANA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: PIULATS, JAUME
TITLE OF INVENTION: ANTI-EGFR SINGLE-CHAIN FVS AND ANTI-EGFR
TITLE OF INVENTION: ANTIBODIES
NUMBER OF SEQUENCES: 30
                                               COLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1914 CCCTCACGTTCGGTGCTGGGACCAAGCTGGTGCTTAA 1950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STALL.
COUNTRY: UC
22201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           593
                                                                              TYPE: nucleic acid
STRANDEDNESS: single
                                                               TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION:
                                                                                                                ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  taccgacgttcggcgggggcaccaagctggaaatcaa 746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 aatctggagtccctgatcgcttcacaggcagtggatctgggacagatttcactctcacca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCAGCAGTGTGAAGACTGAAGACCTGGCAGTTTATTACTGTCAGCAGTATTATAGCTATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ARLINGTON
   SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Application US/08553497A
                                                                                                           732 base pairs
                                                                                                                                                               703-243-6410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ROSELL, ELISABET
BLASCO, FRANCESC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ANSELL, KEITH H. GUSSOW, DETLEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MITJANS, FRANSESC
                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KETTLEBOROUGH, C. BENDIG, MARY M.
                                                               linear
                                   ğ
                                                CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JAUME
                                                                                                                                                                                                                          33,302
                                                                                                                                                                                                              MERCK 1726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             652
                            RESULT 8
US-08-553-497A-25
                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                          Qγ,
                                                                                                                                                                                            QΥ
                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ϋ́
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
Sequence 25, Application Patent No. 5844093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM:
```

```
NAME/KEY: CDS:
: LOCATION: 1..7
US-08-553-497A-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches 541; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN: Balb/c
TISGUE TYPE: Splenocytes
IMMEDIATE SOURCE:
CLONE: 10 D 2 (single-chain
CLONE: chain plus linker)
698 ACACGTTCGGAGGGGGACCAAGCTGGAAATAAAA 732
                                                                                                                                                      578
                                                                                                                                                                                                                                                          542 agaaaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctggag
                                      714 -gacgttcggcgggggcaccaagctggaaatcaaa 747
                                                                            638
                                                                                                  662 tgcaggctgaagacctggcagtttattactgcaagcaatcttataaatctacc-----
                                                                                                                                                                          602 tccctgatcgcttcacaggcagtggatctgggacagatttcactctcaccatcagcagtg
                                                                                                                                                                                                                                  518
                                                                                                                                                                                                                                                                                                              479
                                                                                                                                                                                                                                                                                                                                          482 aatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcagc 541
                                                                                                                                                                                                                                                                                                                                                                                        419
                                                                                                                                                                                                                                                                                                                                                                                                              422 tcacccagtctcccatcttccctggctgtgtcagcaggagaaggtcgctatgagctgca 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   299 ACTATGATTACGACGGACGGTACTTTGACTACTGGGGCCAAGGGACCACGGTCACCGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 aggtcaagctgcaggagtcaggggcagaacttgtgaggtcaggggcctcagtcaatttgt 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N
                                                                                                                                                                                                                                  AGAAACCAGGATCCTCCCCCAGACTCCTGATTTATGACACATCCAACCTGGCTTCTGGAG
                                                                                                                                                                                                                                                                                                              GTGCCAGCTCAAGTGT-------AAGTTACATGTACTACCAGC
                                                                            CCTCAGGTGGCGGTGGCTCGGGTGGTGGGTGGCGGCGGATCTGACATTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggacattgagc 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                actatgaatacgacggctatgctttggactactggggccaagggaccacggtcaccgtct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGCAACTCAGCAGCCTGACATCTGAGGACTCTGCGGTCTATTACTG---TGCCAGTCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tgcacctcagcagcctgacatctgaggacacaaaccgtctattactgtaatgcagtcatct 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacaagcctacc 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCTGCAAGGCTTCCGGCTACACCTTCACCAGCCACTGGATGCACTGGGTGAAGCAGAGGG 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCCTGTTCGCTTCAGTGGCAGTGGGTCTGGGACCTCTTACTCTCTCACAATCAGCCGAA 637
                                                                                                                                                                                                                                                                                                                                                                                          TCACCCAGTCTCCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCA 478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGGTGCAGCTGCAGCAGTCTGGGGGCTGAACTGGTGAAGCCTGGGGGCTTCAGTGAAGTTGT 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1..732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               49.5%;
71.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 369.4; DB 2;
Pred. No. 1.1e-95;
0; Mismatches 181;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fv, heavy and light
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                      601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              358
                                                                                                                                                                                            661
                                                                                                                                                                                                                                                                                                              517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           298
```

US/08553497A

```
Š
                                                                                          US-08-553-497A-25
                                      Best
                          Matches
                                                  Query Match
                                                                                                                                                                                                                 MOLECULE
HYPOTHETICAL: NO
"NTI-SENSE: NO
"YPE: N-terminal
                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
APPLICATION NUMBER: EP 941
FILING DATE: 02-DEC-1994
ATTORNEY/AGENT INFORMATION:
NAME: HAMLET-KING, DIAMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                             TELEFAX: 703-243-6410
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 726 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: ROSELL, E APPLICANT: BLASCO, FAPPLICANT: PIULATS, APPLICANT: PIULATS, TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/553,497A
FILING DATE: 17-NOV-1995
CLASSIFICATION: 530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
ADDRESSEE: MILLEN, WHITE, ZELANO & BRANIGAN,
STREET: 2200 CLARENDON BLVD. SUITE 1400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                   MMEDIATE SOURCE: CLONE: 5 F 1 (single-chain Fv, heavy, light chain,
                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: ME PELECOMMUNICATION INFORMATION: TELEPHONE: 703-243-6333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                          Local Similarity hes 537; Conserv
                                                                                                                                                                                   STRAIN: Balb/c
TISSUE TYPE: SI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: EP 9 FILING DATE: 17-MAR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY: UZIP: 22201
                                                                                                      NAME/KEY: CDS
LOCATION: 1..726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: WO PCT/EP95/00978 FILING DATE: 16-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CITY: ARLINGTON
                                                                                                                                                                                                            ORGANISM:
                                                                                                                                                                                                                                                                                                     STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                         REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                        TOPOLOGY:
1 caggtcaagctgcaggagtcaggggcagaacttgtgaggtcaggggcctcagtcaatttg 60
                                                                                                                                                                                                                                                                                                                 nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ٧A
                                                                                                                                             linker)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MITJANS, FRANSESC
ROSELL, ELISABET
BLASCO, FRANCESC
PIULATS, JAUME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BENDIG, MARY M.
ANSELL, KEITH H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GUSSOW, DETLEF
                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADAN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KETTLEBOROUGH, C.
                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                             mouse
                                                                                                                                                                                  splenocytes
                                                                                                                                                                                                                                                                                                      single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JAUME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ANTI-EGFR SINGLE-CHAIN FVS AND ANTI-EGFR ANTIBODIES
                                      49.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EP 94118970.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EP 94104160.0
                                                                                                                                                                                                                                                                                                                                                                                                                        33,302
                                                                                                                                                                                                                                                                                                                                                                                                             MERCK 1726
                          0,
                                      Score 368.4; DB 2; Pred. No. 2.2e-95;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P
                          Mismatches 186;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #1.30
                                                 Length 726;
                          Indels
                        27;
                        Gaps
                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                    Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                              US-08-553-497A-21
                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                         Patent No.
                                                                                                                                                                                                                                      Sequence
                                                                                                                                             APPLICANT:
                                                                                                                                                         APPLICANT:
                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      418
                                                                                                                                                                                                                                                                                                                                                                                                                                      601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                             577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                       ADDRESSEE:
```

```
GENERAL INFORMATION:
                                                                                          APPLICANT: MITJANS, FRANSESC
APPLICANT: ROSELL, ELISABET
APPLICANT: BLASCO, FRANCESC
APPLICANT: PIULATS, JAUME
TITLE OF INVENTION: ANTI-EGFR
TITLE OF INVENTION: ANTIBODIES
                                              CORRESPONDENCE ADDRESS
                                                                      NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301 tactatgaatacgacggctatgctttggactactggggccaagggaccacggtcaccgtc 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    718 ttcggcggggcaccaagctggaaatcaaa 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               637 ATGGAGGCTGAAGATGCTGCCACTTATTACTGCCAGCAGTGGAGTAGTTACCCGCTCACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        661 gtgcaggctgaagacctggcagtttattactgcaagcaatcttataatctaccg---acg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 478 AGTGACAGCTÇAAGTGT---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241 ATGCAACTCAGCAGCCTGACATCTGAGGACTCTGCGGTCTATTACTG----TGCCAGTCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241 ctgcacctcagcagcctgacatctgaggacacaaaccgtctattactgtaatgcagtcatc 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121 cctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatat 180
                                                                                                                                                                                                                                                                                                                                                           3 21, A.T. 103. No. 5844093.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ctcacccagtctccatcttccctggctgtgtcagcaggagagaggtcgctatgagctgc 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                teeteaggtggaggeggtteaggeggaggtggetetggeggtggeggateggacattgag 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCGGTGCTGGGACCAAGCTGGAAATAAAA 726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTCCCTGTTCGCTTCAGTGGCAGTGGGTCTGGGACCTCTTACTCTCTCACAATCAGCCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gtccctgatcgcttcaccaggcagtggatctgggacagatttcactctcaccatcagcagt 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGAAGACAGGATCCTCCCCCAGACTCCTGATTTATGACACCATCCAACCTGGCTTCTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cagaaaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctgga 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GACTATGATTACGACGGACGGTACTTTGACTACTGGGGCCAAGGGACAACGGTCACCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AATGAGAAATTCAAGAGCAAAGGCCACACTGACTGTAGACAAATCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             aaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTCACCCAGTCTCCAACAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCCTGCAAGGCTTCCGGCTACACCTTCACCAGCCACTGGATGCACTGGGTGAAGCAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAGGTGAAACTGCAGGAGTCTGGGGGCTGAACTGGTGAAGCCTGGGGGCTTCAGTGAAGTTG
                                                                                                                                                                                                                                                                                                                                                                                                  Application US/08553497A
                                                                                                                                                                                                                             ANSELL, KEITH H.
GUSSOW, DETLEF
ADAN, JAUME
                                                                                                                                                                                                                                                                                                        BENDIG, MARY M.
                                                                                                                                                                                                                                                                                                                                 KETTLEBOROUGH,
                          MILLEN,
  CLARENDON BLVD.
                                                                                              ANTI-EGFR SINGLE-CHAIN ANTIBODIES
                     WHITE,
                                                                      30
                                                                                                                                                                                                                                                                                                                              ?
ZELANO & BRANIGAN, P.C.
/D. SUITE 1400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ----AAGTTACACGTACTGGTACCAG
                                                                                                                    FVS
                                                                                                                    AND
                                                                                                                    ANTI-EGFR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60
```

```
Š
                                                                     δÃ
                                                                                                   망
                                                                                                                             Š
                                           밁
                                                                                                                                                              밁
                                                                                                                                                                                      8
                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                     ; LOCATION:
US-08-553-497A-21
                                                                                                                                                                                                                                                                              Best Local Similarity Matches 538; Conserv
                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: 703-243-6410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE NO
HYPOTHETICAL: NO
ANTI-SENSE: NO
TYPE: N-terminal

    182 ATGAGAAATCAAGAGCAAGGCCACACTGACTGACAGACAAATCCTCCAGCACAGCCTACA

                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE TYPE: splenocytes
IMMEDIATE SOURCE:
CLONE: 3 D 3 (single-chain Fv, heavy and light chain
CLONE: plus linker)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FRAGMENT TYPE:
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 732 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: EP 9
FILING DATE: 02-DEC-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
APPLICATION NUMBER: 17-MAR-FILING DATE: 17-MAR-PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC COMPATION OPERATING SYSTEM: PC-DO SOFTWARE: PATENTIN Relaction DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
APPLICATION NUMBER: WO PCT/EP95/00978
FILING DATE: 16-MAR-1995
                242
                                                                        182
                                                                                                     122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STATE: V
                                                                                                                                                                             62 cctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagaggc 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE: 703-243-6410
                                                                                                                                                              62
                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN: Balb/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY: CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                     N
                                                                                                                                                                                                                                     TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                         tgcacctcagcagcctgacatctgaggacacaaaccgtctattactgtaatgcagtcatct
                                                                                                   CCTGCAAGGCTTCCGGCTACACCTTCACCAGCCACTGGATGCACTGGGTGAAGCAGAGGG 121
                                                                                                                                                                                                                      AGGTCCAACTGCAGCAGTCAGGGGCTGAACTGGTGAAGCCTGGGGGCTTCAGTGAAGTTGT 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HAMLET-KING, DIANA
                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17-MAR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17-NOV-1995
                                                                                                                                                                                                                                                                                            48.8%;
71.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Release #1.0, Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EP 94104160.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EP 94118970.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US/08/553,497A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 33,302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MERCK 1726
                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                          Score 364.6; DB 2; Pred. No. 2.6e-94;
                                                                                                                                                                                                                                                                              Mismatches 184;
                                                                                                                                                                                                                                                                              Indels 33;
                                                                                                                                                                                                                                                                             Gaps
                301
                                           241
                                                                                                                                                                                                                                                                              Ψ
```

```
RESULT 10
US-08-553-497A-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 27, Appr.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                             ZIP: 22201
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: ANTI-EGER SINGLE-CHAIN FVS AND ANTI-EGER NUMBER OF EQUENCES: 30
              PRIOR APPLICATION DATA:
APPLICATION NUMBER: WO PCT/EP95/00978
FILING DATE: 16-MAR-1995
PRIOR APPLICATION DATA:
                                                                                                                    COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
ADDRESSEE: MILLEN, WHITE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              698 ACACGTTCGGAGGGGGGGCCAAGCTGGAAATAAAA 732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                714 -gacgttcggcgggggcaccaagctggaaatcaaa 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               518 AGAAGACAGGATCCTCCCCCAGACTCCTGATTTATGACACATCCAACCTGGCTTCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     542 agaaaccaggycagtotcctaaagtgctgatctactgggcatccactagggaatctggag 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   422 tcacccagtctccatcttccctggctgtgtcagcaggagaaggtcgctatgagctgca 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        299 ACTATGATTACGACGGACGGTACTTTGACTACTGGGGCCCAAGGGACCACGGTCACCGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   242 TGCAACTCAGCAGCCTGACATCTGAGGACTCTGCGGTCTATTACTG---TGCCAGTCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      482 aatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcagc
                                                                        APPLICATION NUMBER: US/01
FILING DATE: 17-NOV-1995
CLASSIFICATION: 530
                                                                                                                                                                                                                COUNTRY: UZIP: 22201
                                                                                                                                                                                                                                                  STREET: 2200 CLARENDON BLVD.
CITY: ARLINGTON :
STATE: VA
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCCCTGTTCGCTTCAGTGGCAGTGGGTCTGGGACCTCTTACTCTCTCACAATCAGCCGAA 637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      actatgaatacgacggctatgctttggactactggggccaagggaccacggtcaccgtct 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTGACAGCTCAAGTGT - -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCACCCAGTCTCCAACAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCA
                                                                                                                                                                                                                                             ٧A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Application US/08553497A
                                                                                                                                                                                                                               S.
                                                                                                                                                                                                                                                                                                                                                                                MITJANS, FRANSESC
ROSELL, ELISABET
BLASCO, FRANCESC
                                                                                                                                                                                                                                                                                                                                                                                                                                            GUSSOW, DETLEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BENDIG, MARY M.
                                                                                                                                                                                                                                                                                                                                                                                                                              JAUME
                                                                                                      US/08/553,497A
                                                                                                                                                                                                                                                                                          ZELANO &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -----AAGTTACATGTACTGGTACCAGC
                                                                                                                                       Version
                                                                                                                                                                                                                                                                           BRANIGAN,
                                                                                                                                         #
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      298
```

```
δÃ
                                                        밁
                                                                                     Qy
                                                                                                                    밁
                                                                                                                                               δÃ
                                                                                                                                                                               В
                                                                                                                                                                                                          ρ
                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;
US-08-553-497A-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 530; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 02-DEC-1994
ATTORNEY/AGENT INFORMATION:
NAME: HAMLET KING, DIANA
REGISTRATION NUMBER: 33,302
REFERENCE/DOCKET NUMBER: MERCK 1726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
LENGTH: 726 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELECOMMUNICATION INFORMATION: TELEPHONE: 703-243-6333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IMMEDIATE SOURCE:
LIBRARY: 7 G 1 (single-chain Fv, heavy, light chain,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FRAGMENT TYPE: 1
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HYPOTHETICAL: N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE:
479 GTGACAGCTCAAGTGT---
                                                          419
                                                                                                                      359
                                                                                                                                                                                299
                                                                                                                                                                                                                                           242
                                                                                                                                                                                                                                                         242 tgcacctcagcagcctgacatctgaggacacaaccgtctattactgtaatgcagtcatct 301
                                                                                                                                                                                                                                                                                                                       182 ccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacaccagcctacc 241
                                                                                                                                                                                                                                                                                                                                                                 122
                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: CDS
LOCATION: 1..726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE: 703-2-
TELEPHONE: 703-243-6410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 17-MAR-1994
IOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                             62
                                                                                                                                                                                                                                                                                                                                                                                                                                                          62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN: Bal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LIBRARY: linker)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OPOLOGY:
                                                                                                                                                                             cctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagaggc 121
                    aatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcagc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       aggtcaagctgcaggagtcaggggcagaacttgtgaggtcaggggcctcagtcaatttgt 61
                                                        TCACCCAGTCTCCAACAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCA
                                                                          cctcaggtggaggcggttcaggcggaggtggctctggcggttggcggatcggacattgagc 421
                                                                                                                                                                                                                                         TCGAACTCAGCAGCCTGACATCTGAGGACTGCTCGGTCTATTACTG----TGCCAGTCGGG
                                                                                                                                                                                                                                                                                                    ATGAGAAATTCAAGAGCAAGGCCACACTGACTGTAGACAAATCCTCCAGCACAGCCTACA 241
                                                                                                                                                                                                                                                                                                                                                                CCTGCAAGGCTTCCGGCTACACCTTCACCAGCCACTTGGATCACTGGGTGAAGCAGAGGG 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGGTCAAGCTGCAGCAGTCAGGGGGCTGAACTGGTGAAGCCTGGGGGCTTCAGTGAAGTTGT 61
                                                                                                                 Balb/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-terminal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                splenocytes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               47.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EP 94118970.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 357.8; DB 2;
Pred. No. 2.2e-92;
0; Mismatches 192;
---AAGTTACATGTACTGGTACCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                          541
                                                          478
                                                                                                                   418
517
                                                                                                                                                                                                                                           298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ω
--
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ρ
;
US-08-392-338A-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-392-338A-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 18, Patent No. 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                       INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                       REGISTRÁTION NUMBER: 29,021
REFERENCE/DOCKET NUMBER: 09
TELECOMMUNICATION INFORMATION
TELEPHONE: (202) 371-2600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                         FEATURE:
                                                                                                                                                     SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US 0: FILING DATE: 20-NOV-1992 PRIOR APPLICATION NUMBER: US 0: APPLICATION NUMBER: US 0: O
                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn Release #1.0, Version CURRENT APPLICATION DATA: APPLICATION UNMEER: U$2/08/392,338A FILING DATE: .22-FEB-1995
                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Filpula, David
TITLE OF INVENTION: Multivalent Antigen-Binding Proteins
NUMBER OF SEQUENCES: 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             698 TCGGTGCTGGGACCAAGCTGGAAATAAAA 726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           518 AGAAGACAGGATCCTCCCCCAGACTTCTGATTTATGACACCATCCAACCTGGCTTCTGGAG
                                                                       TYPE: nucleic acid
STRANDEDNESS: both
TOPOLOGY: both
                                                                                                                                                                                                                                                                NAME: Goldstein, Jorge
REGISTRATION NUMBER: 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY: U. ZIP: 20005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: Washington STATE: D.C.
                                     NAME/KEY:
                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                               LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tcggcgggggcaccaagctggaaatcaaa 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tgcaggctgaágacctggcagtttattactgcaagcaatcttataatctaccg---acgt 718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tocotgatogottoacaggoagtggatotgggacagatttoactotcaccatcagcagtg 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               agaaaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGGAGGCTGAAGATGCTGCCACTTATTACTGCCAGCAGTGGAGTAGTTACCCGCTCACGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCCCTGTTCGCTTCAGTGGCAGTGGGTCTGGGACCTCTTACTCTCTCACAATCAGCCGAA 637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Application US/08392338A
                                                                                                                               1460 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              E: Sterne, Kessler, Goldstein & Fox P.L.L.C 1100 New York Avenue, NW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Wood, James
                                                                                                                                                                                           (202) 371-2540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Whitlow, Marc
                 1.,1449
                                     CDS
                                                                                                                                                                                                                                                                                                                          JMBER: US 07/796,936
25-NOV-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Robert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Karl
                                                                                                                                                                                                                                                                                                                                                                                                      US 07/989,846
                                                                                                                                                                                                                                                0977.0030007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 601
```

Query Match Best Local Similarity

47.58; 71.98;

Score 354.8; DB 2 Pred. No. 1.9e-91;

2

Length 1460;

```
Š
                                                                                                                                                 US-09-166-750-18
                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                             οy
                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                           멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                              APPLICANT: Wood, James F.
APPLICANT: Hardman, Karl
APPLICANT: Bird, Robert
APPLICANT: Filpula, David
APPLICANT: Filpula, David
APPLICANT: Follence, Michelle
TITLE OF INVENTION: Methods for Producing Multivalent
TITLE OF INVENTION: Proteins
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                    1036 TTCGGTGCTGGGACCAAGCTTGTGCTGAAA 1065
                                                                                                                                                                                                                                                                                 718
                                                                                                                                                                                                                                                                                                          976
                                                                                                                                                                                                                                                                                                                                                                                  601
                                                                                                                                                                                                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                                                                                                                                                            796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     442 TCCTGCAAGGCTTCTGGCTACACCTTCACTGACCATGCAATTCACTGGGTGAAACAGAAC
 STREET:
                                                                                                                                                                                                                                                                                                                                                                                                           856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       382 CAGGTTCAGCTGCAGCAGTCTGACGCTGAGTTGGTGAAAACCTGGGGCTTCAGTGAAGATT 441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                          ADDRESSEE:
                                                                                                                                                                                                                                                                                                       ctgcacctcagcagcctgacatctgaggacacaaaccgtctattactgtaatgcagtcatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatat 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagagg 120
                                                                                                                                                                                                                                                                              ttcggcggggcaccaagctggaaatcaaa 747
                                                                                                                                                                                                                                                                                                                                                                                                                       cagaaaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctgga 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        aaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGTCACAGTCTCCATCCTCCCTACCTGTGTCAGTTGGCGAGAAGGTTACTTTGAGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacacacgcctac 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAGAAACCAGGGCAGTCTCCTAAACTGCTGATTTACTGGGCATCCGCTAGGGAATCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAGTCCAGTCAGAGCCTTTTATATAGTGGTAATCAAAAGAACTACTTGGCCTGGTACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggacattgag 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tactatgaatacgacggctatgctttggactactgggggccaagggaccacggtcaccgtc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGCAGCTCAACAGCCTGACATCTGAGGATTCTGCAGTGTATTTCTGTACAAGATCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AATGAGAGGTTCAAGGGCAAGGCCACACTGACTGCAGACAAATCCTCCAGCACTGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCTGAACAGGGCCTGGAATGGATTGGATATTTTTCTCCCGGAAATGATGATTTTAAATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       539;
Washington
                                                                                                                                                                                        Application US/09166750
             E: Sterne, Kessler, G
1100 New York Avenue,
                                                                                                                                                     Whitlow, Marc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
           Kessler, Goldstein & Fox P.L.L.C.
ork Avenue, NW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ----TATGGCCTACTGGGGTCAAGGAACCTCAGTCACCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ------GACGTCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches 142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                         Antigen-Binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                720
                                                                                                                                                                                                                                                                                                          1035
                                                                                                                                                                                                                                                                                                                                                                                                                                                            855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      501
                                                                                                                                                                                                                                                                                                                                                                                                           915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ψ
                                                                         В
                                                                                                Ş
                          밁
                                                Š
                                                                                                                                                  Š
                                                                                                                                                                              밁
                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                 밁
                                                                                                                             밁
                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                       Ω
                                                                                                                                                                                                                                                                                                                                뫄
421
```

```
CLASSLE LCAILOR
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/392,338
FILING DATE: 22-FEB-1995
PRIOR APPLICATION NUMBER: US 07/989,846
FILING DATE: 20-NOV-1992
PRIOR APPLICATION NUMBER: US 07/796,936
FILING DATE: 25-NOV-1991
APPLICATION NUMBER: US 07/796,936
FILING DATE: 25-NOV-1991
ATTORNEY/AGENT INFORMATION:
NAME: GOLDSTEATION UNUMBER: 09.021
REFERENCE/DOCKET NUMBER: 09.77.00300(
TELEPONEE: (202) 371-2540
INFORMATION FOR SEQ ID NO: 18:
SEQUENCE CHARACTERISTICS:
LENGTH: 1460 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; LOCATION: US-09-166-750-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity 71.9
Matches 539; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY:
FEATURE:
NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: Patentin Release #1.0, CURRENT APPLICATION DATA: APPLICATION NUMBER: US/09/166,750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                       721
                                                                         361
                                                                                                             682
                                                                                                                                               301
                                                                                                                                                                                 562
                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                   502
                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                        442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              382
                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: nucleic acid
STRANDEDNESS: both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STATE: D.C.
COUNTRY: U.S:A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: Herewith
                                                              tactatgaatacgacggctatgctttggactactgggggccaagggaccacggtcaccgtc
                                                                                                                                                                                                                                                         ANTGAGAGAGGTTCAAGGGCAAGGCCACACTGACTGAGACAAATCCTCCAGCACTGCCTAC
                                                                                                                                                                                                                                                                                                                                                    cctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatat 180
                                                                                                                                                                                                                                                                                                                                                                                                                           tootgoacagottotggottoaacattaaagactactatatgoactgggtgaaacagagg 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gccccgàacttccagggcaaggccactgtgactgcagacacatcctccaacacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                       TCCTGCAAGGCTTCTGGCTACACCTTCACTGACCATGCAATTCACTGGGTGAAACAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGGTTCAGCTGCAGCAGTCTGACGCTGAGTTGGTGAAAACCTGGGGGCTTCAGTGAAGATT 441
ctcacccagtctccatcttccctggctgtgtcagcaggagagaaggtcgctatgagctgc
                                                                                                             AA----
                                                                                                                                                                                                                                                                                                                                 CCTGAACAGGCCCTGGAATGGATTGGATATTTTTCTCCCGGAAATGATGATTTTAAATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1..1449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     bot.h
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     47.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US/09/166,750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                               TATGGCCTACTGGGGTCAAGGAACCTCAGTCACCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0977.003000C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 354.8; DB 3;
Pred. No. 1.9e-91;
0; Mismatches 142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 1460;
                                       GACGTCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      69;
```

Gaps

w

60

501

420

720

360 681 300

240 561

621

480 735

```
DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-166-093-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 18,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
           TELEFAX: (202) 371-2540
INFORMATION FOR SEQ ID NO: 1
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                            FILING DATE: Herewith CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/
FILING DATE: 22-FEB-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: 1
APPLICANT: 1
APPLICANT: 1
                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Flopy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/166,093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1036
                                                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0:
FILING DATE: 20-NOV-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0:
APPLICATION NUMBER: US 0:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Rollence, Michelle
TITLE OF INVENTION: Multivalent Antigen-Binding
NUMBER OF SEQUENCE: 23
CORRESPONDENCE ADDRESS:
                                                               NAME: GOLdStein, Jorge A.
REGISTRATION NUMBER: 29,021
REFERENCE/DOCKET NUMBER: 0977.003000B
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2600
                                                                                                                                                       FILING DATE: 25-NOV-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE;
LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gtccctgatcgcttcacaggcagtggatctgggacagatttcactctcaccatcagcagt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | cagaaaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctgga 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGTCACAGTCTCCATCCTCCCTACCTGTGTCAGTTGGCGAGAAGGTTACTTTGAGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCGGTGCTGGGACCAAGCTTGTGCTGAAA 1065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ttcggcgggggcaccaagctggaaatcaaa 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gtgcaggctgaagacctggcagtttattactgcaagcaatcttata---atctaccgacg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGTCCAGTCAGAGCCTTTTATATAGTGGTAATCAAAAGAACTACTTGGCCTGGTACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               aaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTGAAGACTGAAGACCTGGCAGTTTATTACTGTCAGCAGTATTATAGCTATCCCCTCACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTCCCTGATCGCTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCTCCATCAGCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAGAAACCAGGGCAGTCTCCTAAACTGCTGATTTACTGGGCATCCGCTAGGGAATCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             в, Application US/09166093
6027725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Wood, James F.
Hardman, Karl
Bird, Robert
Filpula, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1100 New York Avenue,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Whitlow, Marc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Kessler, Goldstein
ork Avenue, NW
                                                                                                                                                                                              us 07/796,936
                                                                                                                                                                                                                                                US 07/989,846
                                                                                                                                                                                                                                                                                                     US 08/392,338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qn
                                                                                                                                                                                                                                                                                                                                                                                                               #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1035
```

US-09-172-019-18'

Sequence 18, Applicat Patent No. 6103889.
GENERAL INFORMATION:

Application

us/09172019

APPLICANT: APPLICANT:

Hardman, Karl Bird, Robert Whitlow, Marc

```
; FEATURE:
; NAME/KEY:
; LOCATION:
US-09-166-093-18
                                                                                             밁
                                                                                                                    δã
                                                                                                                                                                                            밁
                                                                                                                                                                                                                  ğ
                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                               δ.
                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                밁
                                                                                                                                            g
                                                                                                                                                                  Š
                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                      밁
 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 539
                î
 1036
             718 ttcggcgggggcaccaagctggaaatcaaa
                                                976
                                                                     661
                                                                                             916
                                                                                                                     601
                                                                                                                                            856
                                                                                                                                                                   541
                                                                                                                                                                                            796
                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                           736
                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                         721
                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                        682
                                                                                                                                                                                                                                                                                                                                                   301 tactatgaatacgacggctatgcttttggactactgggggccaaggggaccacggtcaccgtc
                                                                                                                                                                                                                                                                                                                                                                                       622
                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                     562
                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
les 539; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRANDEDNESS: 1
TOPOLOGY: both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       سر
                                                                                                                                          aaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag
                                                                                                                                                                                                                                          ctgcacctcagcagcctgacatctgaggacacaaccgtctattactgtaatgcagtcatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCCTGCAAGGCTTCTGGCTACACCTTCACTGACCATGCAATTCACTGGGTGAAACAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              teetgeacagettetggetteaacattaaagaetaetatatgeactgggtgaaacagagg 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCGGTGCTGGGACCAAGCTTGTGCTGAAA
                                                             gtgcaggctgaagacctggcagtttattactgcaagcaatcttata---atctaccgacg
                                                                                                          gtccctgatcgcttcacaggcagtggatctgggacagatttcactctcaccatcagcagt
                                                                                                                                                                                                                                                                                                               tcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggacattgag
                                                                                                                                                                                                                                                                                                                                         AA-----
                                                                                                                                                                                                                                                                                                                                                                                      GTGCAGCTCAACAGCCTGACATCTGAGGATTCTGCAGTGTATTTCTGTACAAGATCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                     AATGAGAGGTTCAAGGGCCAAGGCCACACTGACTGCCAGACAAATCCTCCAGCACTGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                  gccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacacacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCTGAACAGGGCCTGGAATGGATTGGATATTTTTCTCCCGGAAATGATGATTTTAAATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGGTTCAGCTGCAGCAGTCTGACGCTGAGTTGGTGAAACCTGGGGCTTCAGTGAAGATT 441
                                                GTGAAGACTGAAGACCTGGCAGTTTATTACTGTCAGCAGTATTATAGCTATCCCCTCACG
                                                                                             GTCCCTGATCGCTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCTCCATCAGCAGT
                                                                                                                                                                                            AAGTCCAGTCAGAGCCTTTTATATAGTGGTAATCAAAAGAACTACTTGGCCTGGTACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDS
1..1449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         47.5%;
71.9%;
                                                                                                                                                                                                                                                                                                                                        -----TATGGCCTACTGGGGTCAAGGAACCTCAGTCACCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 354.8; DB 3; Pred. No. 1.9e-91; 0; Mismatches 142;
 1065
                        747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                1035
                                                                                             975
                                                                                                                                                                   900
                                                                                                                                                                                                                                                                  480
                                                                                                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                                                                                                              360
                                                                                                                                                                                                                                                                                                                                                                                      681
                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                     621
                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 501
                                                                     717
                                                                                                                     660
                                                                                                                                            915
                                                                                                                                                                                            855
                                                                                                                                                                                                                 540
                                                                                                                                                                                                                                           795
                                                                                                                                                                                                                                                                                         735
                                                                                                                                                                                                                                                                                                                                         720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ψ
```

-----GACGTCGTG

735

720

1035

975

855

795

```
Š
                                     밁
                                                                      Š
                                                                                                          멍
                                                                                                                                              Š
                                                                                                                                                                                  В
                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; NAME/KEY:
; LOCATION:
US-09-172-019-18
                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                        Matches 539;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: (202) 371-2540 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REGISTRATION NUMBER: 29,021
REFERENCE/DOCKET NUMBER: 0977.003000D
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US 07
FILING DATE: 20-NOV-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07
FILING DATE: 25-NOV-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/172,019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US 0: FILING DATE: 22-FEB-1995 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 25-NOV-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS
   301
                                                                                                                                                181
                                                                                                                                                                                442
                                                                                                                                                                                                                                                                                                                                  382 CAGGTTCAGCTGCAGCAGTCTGACGCTGAGTTGGTGAAACCTGGGGGCTTCAGTGAAGATT 441
                                                                                                                                                                                                                                                                             61 teetgeacagettetggetteaacattaaagaetaetatatgeaetgggtgaaacagagg 120
                                                                                                                                                                                                                                                                                                                                                       1 caggtcaagctgcaggagtcagggcagaacttgtgaggtcaggggcctcagtcaatttg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
                                                            ctgcacctcagcagcctgacatctgaggacacaaccgtctattactgtaatgcagtcatc 300
tačtatgaatacgacggctatgctttggactactggggccaagggaccacggtcaccgtc
                                    GTGCAGCTCAACAGCCTGACATCTGAGGATTCTGCAGTGTATTTCTGTACAAGATCCCTG
                                                                                                            AATGAGAGGTTCAAGGGCAAGGCCACACTGACTGCAGACAAATCCTCCAGCACTGCCTAC
                                                                                                                                          gccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacacagcctac 240
                                                                                                                                                                                                                                                          TCCTGCAAGGCTTCTGGCTACACCTTCACTGACCATGCAATTCACTGGGTGAAACAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Goldstein,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1460 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 E: Sterne, Kessler, Goldstein & Fox P.L.L.C 1100 New York Avenue, NW
                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Herewith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Jorge A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Antigen-Binding 23
                                                                                                                                                                                                                                                                                                                                                                                                                         47.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nucleic Acid Molecules Encoding Single-Chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US 07/796,936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US 08/392,338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US 07/989,846
                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                      Score 354.8; DB 3;
Pred. No. 1.9e-91;
0; Mismatches 142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (As
                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Amended
                                                                                                                                                                                                                                                                                                                                                                                                                                            1460;
                                                                                                                                                                                                                                                                                                                                                                                                        69;
                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                     681
                                                                                                          621
                                                                                                                                                                                                                                                          501
                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-166-094-18; Sequence 18, Application US/09166094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 15
                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/166,094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: V
APPLICANT: V
APPLICANT: I
                                                                                       APPLICATION NUMBER: US 0: FILING DATE: 20-NOV-1992 PRIOR APPLICATION DATA:
FILING DATE: '25-NOV-1991
Aftorney/AGENT INFORMATION:
NAME: Goldstein, Jorge A
REGISTRATION NUMBER: 29,
                                                                                                                                              FILING DATE: 22-FEB-: PRIOR APPLICATION DATA:
                                                                                                                                                                                PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/392,338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Rollence, Michelle
TITLE OF INVENTION: Multivalent Antigen-Binding Proteins
NUMBER OF SEQUENCES: 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1036 TTCGGTGCTGGGACCAAGCTTGTGCTGAAA 1065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              718 ttcggcgggggcaccaagctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361 tcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggacattgag 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        682
                                                                                                                                                                                                                                                                                                                                                                                                                         STREET: 1100 New CITY: Washington STATE: D.C.
                                                     APPLICATION NUMBER: US 07/796,936 FILING DATE: 25-NOV-1991
                                                                                                                                                                                                                    FILING DATE: H
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY: U
ZIP: 20005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gtgcaggctgaagacctggcagtttattactgcaagcaatcttata---atctaccgacg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gtccctgatcgcttcacaggcagtggatctgggacagatttcactctcaccatcagcagt 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               aaatocagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ctcacccagtctccatcttccctggctgtgtcagcaggagagaggtcgctatgagctgc 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTGAAGACTGAAGACCTGGCAGTTTATTACTGTCAGCAGTATTATAGCTATCCCCTCACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTCCCTGATCGCTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCTCCATCAGCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGAAACCAGGGCAGTCTCCTAAAACTGCTGATTTACTGGGCATCCGCTAGGGAATCTGGG 915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cagaaaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctgga 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAGTCCAGTCAGAGCCTTTTATATAGTGGTAATCAAAAGAACTACTTGGCCTGGTACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGTCACAGTCTCCATCCTCCCTACCTGTGTCAGTTGGCGAGAAGGTTACTTTGAGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCCTCA----;-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AA - -
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1100 New York Avenue,
                                                                                                                                                                                                                                                                                                                                                                                                        U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bird,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hardman, Karl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Filpula, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Whitlow, Marc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Wood, James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sterne, Kessler, Goldstein &
                                                                                                                                                                                                                                         Herewith
                                                                                                                                                                 22-FEB-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Robert
   Jorge A.
CR: 29,021
                                                                                                                                                                                                                                                                                          Release #1.0,
                                                                                                                             US 07/989,846
                                                                                                                                                                                                                                                          US/09/166,094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TATGGCCTACTGGGGTCAAGGAACCTCAGTCACCGTC
                                                                                                                                                                                                                                                                                              Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FOX P.L.L.C
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ρ
                             οy
                                                                밁
                                                                                              δÃ
                                                                                                                                 밁
                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                    멍
                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-166-094-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER: 0977.003000A
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2540
TELEFAX: (202) 371-2540
INFORMATION FOR SEQ ID NO: 18:
SEQUENCE CHARACTERISTICS:
LENGTH: 1460 base pairs
TYPE: nucleic acid
STRANDEDNESS: both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 47.5
Best Local Similarity 71.5
Matches 539; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
                                                                                                                                                                  601
                                                                                                                                   916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               502
                               718
                                                                976
                                                                                                  661
                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                      796
                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                       736
                                                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                                                                          721
                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301 tactatgaatacgacggctatgctttggactactggggccaaggggaccacggtcaccgtc 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241 ctgcacctcagcagcctgacatctgaggacacaaccgtctattactgtaatgcagtcatc 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              442 TCCTGCAAGGCTTCTGGCTACACCTTCACTGACCATGCAATTCACTGGGTGAAACAGAAC 501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                382 CAGGTTCAGCTGCAGCAGTCTGACGCTGAGTTGGTGAAACCTGGGGGCTTCAGTGAAGATT 441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            562 AATGAGAGGTTCAAGGGCCAAGGCCACACTGACTGCAGACAAATCCTCCAGCACTGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY: both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY: CDS
LOCATION: 1..1449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 caggtcaagctgcaggagtcaaggggcagaacttgtgaggtcaaggtcaagtcaagtcaatttg 60
                                                                                                                                                                                                                                                                                                                                    gtccctgatcgcttcaccaggcagtggatctgggaccagatttcactctcaccatcagcagt
                                                                                                                                                                                                gccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacacacgcctac 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatat 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagagg 120
                 ttcggcgggggcaccaagctggaaatcaaa 747
                                                           GTGAAGACTGAAGACCTGGCAGTTTATTACTGTCAGCAGTATTATAGCTATCCCCTCACG
                                                                                  aaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag
                                                                                                                                                                                                                                                                                                                                                                                                                                    tcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggacattgag 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCTGAACAGGGCCTGGAATGGATTGGATATTTTCTCCCCGGAAATGATGTTTAAATAC
TTCGGTGCTGGGACCAAGCTTGTGCTGAAA 1065
                                                                                                                                 GTCCCTGATCGCTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCTCCATCAGCAGT
                                                                                                                                                                                                                                                                    AAGTCCAGTCAGAGCCTTTTATATAGTGGTAATCAAAAGAACTACTTGGCCTGGTACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA-----TATGGCCTACTGGGGTCAAGGAACCTCAGTCACCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTGCAGCTCAACAGCCTGACATCTGAGGATTCTGCAGTGTATTTCTGTACAAGATCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               47.5%; Score 354.8; DB 3; Length 1460; 71.9%; Pred. No. 1.9e-91; vative 0; Mismatches 142; Indels 69;
                                                                                                                                                                                                                                                                                                                                                                                                        -----GACGTCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                1035
                                                                                                                                                                 660
                                                                                                  717
                                                                                                                                                                                                                                                                                                      540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           561
                                                                                                                               975
                                                                                                                                                                                                                                                                    855
                                                                                                                                                                                                                                                                                                                                                                                                        735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ω
```

Ş

δÃ

Ş

Search completed: February 17, 2001, 22:59:28 Job time: 35119 sec

THIS PAGE BLANK (USP TODaniu)

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            February 17, 2001, 13:13:59; Search time 1856.43 Seconds (without alignments) 2009.885 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GenEmbl: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1118133 seqs, 2558875100 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-297-181-1
729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            caggtgcagctgcagcagtc.....gcaccaagctggaaatcaaa 729
                                                                                                                                                                                                                                                                                          em_or:*
em_ov:*
em_htg1:*
em_htg2:*
                                                                                                                          gb_ba3:*
gb_in1:*
                                                                                                                                                                                                                                         em_p1:*
                                                                                                                                                                                                                                                                                                                           em_om: *
                                                                             gb_pl3:*
                                                                                                                                                                                                            em_sts:*
                                                                                                                                                                                                                                                                                                                                          em_in:*
                                                                                                                                                                                                                                                                                                                                                                                         em_fun:*
                                                                                                                                                                                                                                                                                                                                                                                                                        gb_sy:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       b_om:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2236266
```

	<b></b> .				:		. :																																			
	85.	84:	83:	82:	81:	80∷	79:	78:	77:	76:	75 ::	74:	73:	72:	71:	70:	69:	68:		66:	9 5 5			62:		60:	9:							52:			49:	48:	47:	46:	45	1. 77
<u>,</u>	ם ה	Ě	.em_htg0:		gb_pat1:		gb_vil:*	gb_sts2:	gb_sts1:	볹	ı	gb_htg21	gb_htg20	լ Ի	եր	ļ	뱵	֡֡֝֝ <del>֡</del>	μt	뉴	μt	T T	_ht	ļ	뉴	ģ	Lhtg	_htg	T T	ļ, ht	ր Մրե	b	d q	ı	ı T		٦	ſ.	em_hum3:	em_htq10	ם ע	em hta8:
		*	*	*				*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*				*	*	*	*	*	*	*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by anglysis of the total score distribution.

## SUMMARIES

	#*.						!	Re
19 20 21	17	14 16	13:	10 .	876	.∪1.4> ∪	22	Result No
420.2 420.2 418.4	426.4.	432.2 432.2 429	446.4	455.4	500.8 500.4 476.2	716.2	719.4	Score
57. 5 57. 4	58.5 58.3	59.3 58.8	59.3	62.5	68.5 65.3	98.2 77.5	98.7	Query Match
747 729 723	786 1679	810 1637 753	759 753	747 738	864 747 732	1611 912	729 768	Query Match Length
12 12	11 81	81 12 11	112	12	12 11 12	81 12	12	DB
AF226875 AF162709 AF169027	MMU131195 AR054409	A45006 AX006750 AX003768	A68604 SCO250763 AX003776	ACO131533 AF064776	XXU31739 MMVHVKFG XXU44796	A59386 A59381 AB030249	ACO131532 A57272	IB
AF162709 Synthetic AF162709 Synthetic AF169027 Synthetic		A45006 Sequence 1 AX006750 Sequence AX003768 Sequence	A58604 Sequence 4 AJ250763 Mus muscu AX003776 Sequence	AJ131533 Synthetic AF064776 Synthetic	U31739 Single chai Z29480 M.musculus U44796 Synthetic c	A59386 Sequence 36 A59381 Sequence 31 AB030249 Synthetic		Description

```
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    415.2
386.2
380.2
377.4
377.4
377.4
3377.4
3377.4
3364.8
364.8
364.8
361.8
361.8
361.8
361.8
361.8
361.8
361.8
361.8
361.8
361.8
                                                                                                                                                                                                          Direct Sub
Submitted
Cochin de
                                                                                                                                                                                                                                                                                            Caron de Fromentel,C., Gruel,N., Venot,C., Debussche,L., Conseiller,E., Dureuil,C., Teillaud,J.L., Tocque,B. and Bracco,L. Restoration of transcriptional activity of p53 mutants in human tumour cells by intracellular expression of anti-p53 single chain
                                                                                                                                                                                                                                                                                                                                                                                                              ACO131532 729 by
Synthetic construct
linker sequence.
                                                                                                                                                                                                                                                                                      E۷
                                                                                                                                                                                                                                                                                                                                       artificial sequence.

l (bases 1 to 729)
                                                                                                                                                                                                                                                                                                                                                                      antibody; immunoglobulin synthetic construct.
                                                                                                                                                                                                                                            de Fromentel,C
                                                                                                                                                                                                                                                                          Oncogene 18 (2), 551-557
                                                                                                                                                                                                                                                                                                                                                            synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                        AJ131532
AJ131532.1 GI:4033863
                                                                                                                                                                                                                                                                                      fragments
                                                                                                                                                                                                                                                      (bases 1 to 729)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submission ted (16-DEC-1998) de Fromentel C.,
                                                                                                                                                                                                            de Genetique Moleculaire,
 /translation="QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEMIGWIDPENGDTEYAPKEGCKATMTADTSSWTAYLCLSSLASEDTAYYYCURYGDALDYWGQGTTYLVSGGGGSGGGSGGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSWGGTYLMYLLQRPQQSPKLLIYLVSKLDSGVPDRFTGSGSGTDFTLKINKVEAEDLGVYYCWQGTHSPLTFGAGTKLEIK"
                                                   /product="anti-p53 ScFv ; /protein_id="CAA10385.1" /db_xref="GI:4033864"
                                                                                                                                              /organism="synthetic construct"
/db_xref="taxon:32630"
/cell_line="PAb421"
                                                                                                                                                                                      Location/Qualifiers
                                                                                  /codon_start=1
/transl_table=11
                                                                                                                                       /cel
                                                                                                      note-"synthetic"
                                                                                                                            /focus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    _type="hybridoma"
                                                                                                                                                                                                                                                                                                                                                                                                                                  đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AX003772
AF000955
AX001509
AF141321
MMU40581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SCO250761
S57990
AR085460
AR088866
I36723
AX003782
A33046
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A83211
A83217
AX003780
AF002242
MMU62527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A83223
A83230
MMSCFVP25
A95255
A95214583
ASY14583
MMU20617
                                                                                                                                                                                                                                                                                                                                                                                                                        mRNA
anti-p53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ALIGNMENTS
                                                                                                                                                                                                                                                                          (1999)
                                                                                                                                                                                                                                                                                                                                                                                superfamily;
                                                                      antibody (scFv421)"
                                                                                                                                                                                                                                                                                                                                                                                                                        Scfv
                                                                                                                                                                                                            22
                                                                                                                                                                                                            rue Mechain
                                                                                                                                                                                                                                                                                                                                                                                Scrv; variable region.
                                                                                                                                                                                                                                                                                                                                                                                                                        antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                   NAS
                                                                                                                                                                                                                        380 INSERM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AR085460 Sequence
AR088866 Sequence
136723 Sequence
AX003782 Sequence
A33046 Anti-oxazol
AX003772 Sequence
AF000955 Mus muscu
AX001509 Sequence
AF041321 Mus muscu
U40581 Mus musculu
                                                                                                                                                                                                                                                                                                                                                                                                                        16-MAR-2000 (scFv421) containing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           U20617 Mus musculu
A83227 Sequence 47
A83211 Sequence 31
A83217 Sequence 37
AX003780 Sequence
AF002242 Mus musculu
                                                                                                                                                                                                             PARIS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AJ250761 Mus muscu
S57990 B3(Fv)-PE40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Artificial
Sequence 1
Artificial
                                                                                                                                                                                                            Imstitut
75014,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
ORIGIN
          Š
                               B
                                                  Š
                                                                     성,
                                                                                          Ş
                                                                                                                 밁
                                                                                                                                  δÃ
                                                                                                                                                        В
                                                                                                                                                                          Š
                                                                                                                                                                                                 밁
                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                      맑
                                                                                                                                                                                                                                                                                                                                                                                        õ
                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       V_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              V_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                               ,
6,61
                                                                                                                                                          481
                                661
                                                                        601
                                                                                                                  541
                                                                                                                                     541
                                                                                                                                                                              481
                                                                                                                                                                                                  421
                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Sim hes 723;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Match
gaaatcaaa
                                                                                                                                                                                                                                                                                                                           aagcgcctaatctatctggtgtctaaactggactctggagtccctgacaggttcactggc
                                                                                                                                                                     ttggatagtgatggaaagacatatttgaattggttgttacagaggccaggccagtctcca
                                                                                                                                                                                                            actttgtcggttaccattggacaaccagcctccatctcttgcaagtcaagtcagagcctc
                                                                                                                                                                                                                                                                                                                                                                                                                         cctgaacagggcctggagtggattggatggattgatcctgagaatggtgatactgaatat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        caggtgcagctgcagcagtctggggcagagcttgtgaggtcaggggcctcagtcaagttg
                                         gtttattattgotggcaaggtacacattctccgctcacgttccggtgctggcaccaagctg
                                                                                  agtggatcagggacagatttcacactgaaaatcaacagagtggaggctgaggatttggga
                                                                                                                                                          TTGGATAGTGATGGAAAAACATATTTGAATTGGTTGTTACAGAGGCCAGGCCAGTCTCCA
                                                                                                                                                                                                                                             TCAGGCGGAGGTGGCTGGCGGTGGCGGATCGGATGTTTTGATGACCCCAAACTCCACTC
                                                                                                                                                                                                                                                       GATGCTTTGGLCTATTGGGGCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGCGGT
                                                                                                                                                                                                                                                                                              gatgctttgggcctattggggccaagggaccacggtcaccgtctcctcaggtggaggcggt
                                                                                                                                                                                                                                                                                                                                                                                gccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                               CCTGAACAGGGCCTGGAGTGGATTGGATGGATTGATCCTGAGAATGGTGATACTGAATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGGTGCAGCTGCAGCAGTCTGGGGGCAGAGCTTGTAAGGTCAGGGGGCCTCAGTCAAGTTG
                                                            AGTGGATCAGGGACAGATTTCACACTTAAAATCAACAGAGTGGAGGCTGAGGATTTGGGA
                                                                                                                 AAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGAGTCCCTGACAGGTTCACTGGC
                                                                                                                                                                                                    GCCCCGAAGTTCCAGGGCCAAGGCCACTATGACTGCAGACACATCCTCCAATACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCCTGCACAGCTTCTGGCTTCAACATTAAAGACTACTATATGCACTGGGTGAAGCAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similar_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
           729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Mus musculus"
/db_xref="taxon:10090"
117. .131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /product="immunoglobulin
132. .243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Mus musculus"
/db_xref="taxon:10090"
1. .116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /product="immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98.7%;
99.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   inker
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 719.4; DB
Pred. No. 1.3e-21
); Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sequence"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             light chain variable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     heavy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    chain variable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    region"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                   720
                                                                        660
                                                                                            660
                                                                                                                  600
                                                                                                                                     600
                                                                                                                                                          540
                                                                                                                                                                                                  480
                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                             420
                                                                                                                                                                                                                                                               420
                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                              540
                                                                                                                                                                                                                                                                                                                              300
                                                                                                                                                                                                                                                                                                                                                                      240
```

0

RESULT 1 ACO131532

DEFINITION

JOURNAL MEDLINE REFERENCE AUTHORS

TITLE JOURNAL

REFERENCE

TITLE AUTHORS

FEATURES

CDS

В

721

GAAATTAAA 729

```
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
ORGANISM
       Š
                                  В
                                                         Ş
                                                                                        D
                                                                                                               δõ
                                                                                                                                           B
                                                                                                                                                                     Ş
                                                                                                                                                                                                    멍
                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                QY
                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                               δõ
                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 99.0
Matches 722; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                         601 agtggatcagggacagatttcacactgaaaatcaacagagtggaggctgaggatttggga 660
                                                 541 aagcgcctaatctatctggtgtctaaactggactctggagtccctgacaggtteactggc 600
                                                                                                                                                                                                 268
                                                                                                                                                                                                                                                                                                                            241 ctgcagctcagcagcctggcatctgaggacactgccgtctattattgtaatttttacggg 300
                                                                                                                                                                                                                                                                                                                                                                   148 CCTGAACAGGGCCTGGAGTGGATTGGATGGATTGATCCTAAGAATGGTGATACTGAATAT 207
                                                                                                                                                                                                                                                                                                                                                                                                                                         121 cctgaacagggcctggagtggattggattggattcgagaatggtgatactgaatat 180
                                 568 AAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGAGTCCCTGACAGGTTCACTGGC 627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ttggatagtgatggaaagacatatttgaattggttgttacagaggccaggccagtctcca 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCTGCACAGCTTCTGGCTTCAACATTAAAGACTACTATATGCACTGGGTGAAGCAGAGG 147
                                                                                      TTGGATAGTGATGGAAAAACATATTTGAATTGGTTGTTACAGAGGCCAGGCCAGTCTCCA 567
                                                                                                                                                                                                                                                                                                             CTGCAGCTCAGCAGCCTGGCATCTGAGGACACTGCCGTGTATTATTGTAATTTTTACGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              unidentified unidentified unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 (bases 1 to 768)
Bracco, L., Schweighoffer, F. and Tocque, B.
CONDITIONAL EXPRESSION SYSTEM
PATENT: WO 9630512-A 4 03-OCT-1996;
RHONE POULENC RORER SA (FR)
Other publication AU 5402096 961016
Other publication FR 2732348 961004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A57272 768 bp DNA
Sequence 4 from Patent WO9630512.
A57272
A57272.1 GI:3713167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="unidentified"
/db_xref="taxon:32644"
185 c 218 g 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 717.8; DB 81; Pred. No. 4.2e-212; 0; Mismatches 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               184 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 768;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Gaps
                                                                                                                                                                                                                                                                                                               327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
```

	•						•							<u> </u>		
QY 4.1 acttigtoggitaccattiggacaaccaccictigcaagiccicca. 35  QY 481 tiggatagtg3itggaaagacatattigaattiggttgttacaagaggccaagiccagictcca. 540	361 tcaggcggaggtggctctggcggtggcggatcggatgttttgatgacccaaactccactc 42	Qy 301 gatgetttggactattggggccaagggaccacggtcaccgtetcctcaggtggaggcggt 360	y 24 b 25	Qy 181 gccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctac 240	Qy 121 cctgaacagggcctggagtggattggattggattgatcctgagaattggtgatactgaatat 180 	Qy 61 tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg 120	Qy 1 caggtgcagctgcagcagtctggggcagagcttgtgaggtcaggggcctcagtcaagttg 60	Ouery Match 98.2%; Score 716.2; DB 81; Length 749; Best Local Similarity 98.9%; Pred. No. 1.3e-211; Matches 721; Conservative 0; Mismatches 8; Indels 0; Gaps 0;	A JOYSTANDER THE CONTROL OF THE CONT	COMMENT Other publication FR 2736915 970124.  FEATURES Location/Qualifiers  Source (0.072915mm="unidentified"	REFERENCE 1 (bases 1 to 749)  AUTHORS Conseiller, E. and Bracco, L.  TITLE P53 PROTEIN VARIANTS AND THERAPEUTICAL USES THEREOF  JOURNAL Patent: WO 9704092-A 36 06-FEB-1997;  RHONE POULENC RORER SA (FR)	KEYWORDS unidentified	749 36 from E	paaatcaaa           AAATTAAA	Oy 661 gtttattgctggcaaggtacacattctccggctcacgttcggtgctggcaccaagctg 720 	

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSION
KEYWORDS
SOURCE
                                                  δÃ
                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
          οy
                                밁
                                                                                           ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                              FEATURES
source
                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                   Query Match
Best Local S
Matches 721
                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
            121
                                                                                                                   Local Sin
thes 721;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         550
                                 67
                                                     61
                               caggtgcagctgcagcagtctggggcagagcttgtgaggtcaggggcctcaggtcaagttg 60
agtggatcagggacagatttcacactgaaaatcaacagagtggaggctgaggatttggga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGCTGAAA 738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gaaatcaaa 729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTTTATTATTGCTGGCAAGGTACACATTCTCCGCTCACGTTCGGTGCTGGGACCAAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gtttattattgctggcaaggtacacattctccgctcacgttcggtgctggcaccaagctg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         aagcgcctaatctatctggtgtctaaactggactctggagtccctgacaggttcactggc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A59381
Sequence
A59381
A59381.1
                                                                                                                                                                                                                                                                                                                                                                                     P53 PROTEIN VARIANTS AND THERAPEUTICAL Patent: WO 9704092-A 31 06-FEB-1997; RHONE POULENC RORRER SA (FR) Other publication FR 2736915 970124.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                unidentified unclassified
                                                                                                                                                                                                                                                                                                                                                                                                                                            1 (bases 1 to 1611)
Conseiller, E. and Br
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      unidentified
                                                                                                                             Similarity
                                                                                                                                                                                    369
                                                                                                                    Conservative
                                                                                                                                                                                   ø
                                                                                                                                                                                                              /db_xref="G1:3714714"
//db_xref="G1:3714714"
//translation="maqvqlorsgasyklsctasgenikdyymhwykqrpe
gclewigwidpengdteyapkfogkatmtadtssntaylqlsslasedtayyycneyg
galdywoggt"\texturyvssogggsoggsgoggsbylmtopplilsytioppasiscksso
slldywoggt"\texturyvssogggsoggsgoggsbylmtopplitsytioppatapapapspesspplss
slldyvgcwoggthsplitgogapkrliylvskldsgypdretgsgsgtdetlkinrvea
edlgvyycwoggthsplitgogapkrliylvskldsgypdretgapapapspesspplsss
vpsqktyoggyhtsplitgotaksvtotyspalnemegglarvestddrnte
rnramaiykgsghtfekkrotyspalnemegglarvestddrnte
rnramaiykgsghtfekkrotyspalnemegglarvestddrnte
rnsvyvpyeppbygsdcttihynymcnsscnggmnrrpiltiitedssgnllgrnse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31
                                                                                                                                                                                            EVRYCACPGRDRRTEEENLRKKGEPHHELPPGSTKRALPNNTSSSPQPKKKPLDGDLKALKEKLKALEEKLKALEEKLKALVGER"
                                                                                                                                                                                                                                                                                                              /codon_start=1
/protein_id="CAA03533.1"
                                                                                                                                                                                                                                                                                                                                                        organism="unidentified"/db_xref="taxon:32644"
                                                                                                                                                                                                                                                                                                                                     'note="unnamed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GI:3714713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1611
from 1
                                                                                                                                                                                                                                                                                                                                               .1608
                                                                                                                             98.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                            and Bracco, L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 bp
Patent
                                                                                                                                                                                    a
                                                                                                                  Pred. No. 1.4e

O; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA
W09704092.
                                                                                                                                                                                                                                                                                                                                  protein product"
                                                                                                                 ; DB 81;
1.4e-211;
                                                                                                                                                                                                                                                                                                                                                                                                                                  USES
                                                                                                                    Indels
                                                                                                                                       Length
                                                                                                                                       1611;
                                                                                                                 0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   549
                              TITLE
JOURNAL
REFERENCE
AUTHORS
                                                                                              JOURNAL
MEDLINE
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                   RESULT
AB030249
                                                                                                                                                                                                                                                ACCESSION
VERSION
                                                                                                                                                                                                       SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                 TITLE
            JOURNAL
                       TITLE
                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        481
                                                                                                                                                                                                                                                                                                                                                                                         667
                                                                                                                                                                                                                                                                                                                                                                                                                                  607
                                                                                                                                                                                                                                                                                                                                                                                                                                                      601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             427
                                                                                                                                                                                                                                                                                                                                               727
                                                                                                                                                                                                                                                                                                                                                                  721
                                                                                                                                                                                                                                                                                                                                                                                                            661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             127
                                                                                                                                                                                                                                                                                                                                               GAGCTGAAA
                                                                                                                    96249052
```

```
gaaatcaaa 729
|| | ||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              agtggatcagggacagatttcacactgaaaatcaacagagtggaggctgaggatttggga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            aagcgcctaatctactggtgtctaaactggactctggagtccctgacaggttcactggc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          actttgtcgg:ttaccattggacaaccagcctccatctcttgcaagtcaagtcagagcctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ctgcagctcagcagcctggcatctgaggacactgccgtctattattgtaatttttacggg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gccccgaagtrccagggcaaggccactatgactgcagacacatcctccaatacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGTGGATCAGGGACAGATTTCACACTGAAAATCAACAGAGTGGAGGCTGAGGATTTGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGAGTCCCTGACAGGTTCACTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTGGATAGTGATGGAAAGACATATTTGAATTGGTTGTTACAGAGGCCAGGCCAGTCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGCAGCTCAGCAGCCTGGCATCTGAGGACACTGCCGTCTATTATTGTAATTTTTACGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCCCGAAGTTCCAGGGCAAGGCCACTATGACTGCAGACACATCCTCCAATACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCTGAACAGGGCCTGGAGTGGATTGGATGGATTGATCCTGAGAATGGTGATACTGAATAT
                                             Nakayashiki, N., Yoshikawa, K., Nakamura, K., Hanai, N., Okamoto, Nizuno, M., Wakabayashi, T., Saga, S., Yoshida, J. and Takahashi, Production of a single chain variable fragment antibody recog type III mutang epidermal growth factor receptor upublished (199)
3 (bases 1 to 912)
Yoshikawa, K. and Nakayashiki, N.
                                                                                                                                                                                       and Takahashi,T.

Monoclonal antibody against the fusion junction deletion-mutant epidermal growth factor recepton Br. J. Cancer 73 (11), 1366-1372 (1996)
Direct Submission
Submitted (21-JUL-1999)
Kazuhiro Yoshikawa, Aicl
                                                                                                                                                                                                                                                                                                                                             AB030249.1 GI:5596361 light chain variable d single chain antibody.
                                                                                                                                                                                                                                                                                                                synthetic construct synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                             AB030249 912 bp
Synthetic Mus musculus
                                                                                                                                                                                                                                                                                               artificial sequence.
                                                                                                                                                                                                                                                                               (sites)
                                                                                                                                                                 (sites)
                                                                                                                                                                                                                                                                Yoshikawa, K.,
                                                                                                                                                                                                                                                                                                                                  DNA
   Aichi Medical
                                                                                                                                                                                                                                                                                                                                                               domain;
                                                                                                                                                                                                                                                                                                                                                                                                                              DNA
gene
                ç
               the
                                                                                                                                                                                                                                                                Obata,Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                for
                                                                                                                                                                                                                                                                                                                                                               heavy
DDBJ/EMBL/GenBank
bal University, Dep
                                                                                                                                                                                                                                                                                                                                                                                                                                3C10
                                                                                                                                                                                                                                                                                                                                                               chain
                                                                                                                                                                                                                                                                Shibuya, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                           SYN
single
                                                                                                                                                                                                                                                                                                                                                               variable
                                                                                                                                                                                                                                                                                                                                                                                                                                chain
                                                                                                                                                                                                                                                                Aoki,
                                                                                                                                                                                                                                  of.
 databases.
partment of
                                                                                                                                                                                                                                                                                                                                                                                                                              22-OCT-1999
antibody,
                                                                                                                                                                                                                                                                                                                                                                 domain;
                                                                                                                                                                                                                                                                  ŝ
                                                                                                                (amoto,S.,
hashi,T.
recognizing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
```

598

538

658 655

```
QΥ
                                                                                  δõ
                                                                                                                                                                                           망
                                                                                                                                                                                                                            δã
                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                Ωy
                                                   멍
                                                                                                                     밁
                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_feature
                    416
                                                                                                                                                                                                                                                                                                                                                                       122
                                                                                                                                                                                                                                                                185
                                                                                                                                                                                                                                                                                                   182
                                                                                                                                                                                                                                                                                                                                    125
                                                                                                                                                                                                                                                                                                                                                                                                        65
                                                                                                                                                                                                                                                                                                                                                                                                                                         62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N
                                                                                                                                                                                                                                                                               ccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctacc 241
                                                                                                                                                                                                                                                                                                                                                     ctgaacagggcctggagtggattggattggattcctgagaatggtgatactgaatatg 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              aggtgcagctgcagcagtctggggcagagcttgtgaggtcaggggcctcagtcaagttgt 61
cactcactttgtcggttaccattggacaaccagcctccatctttgcaagtcaagtcaga
                                                                                                                                             atgctttggactattggggccaagggaccacggtcaccgtctcctcaggtggaggcggtt 361
                                                                                                                                                                                                                                                                                                                                                                                                                          cctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagaggc 121
                                                     CCGGTGGTGGTTCCCGGAGGTGGTGGTTCACATATGGATGTTGTGATGACCCAGTCTC
                                                                                                                       ----TGGAGTCTACTGGGGCCCAGGAACCACTCTCACAGTCTCCTCAGGAGGTGGTGGTG
                                                                                                                                                                                           TGCAACTCAGCAGCCTGACATCTGAGGACACTGCCGTCTATTACTGTGCCCTTCGCGG--
                                                                                                                                                                                                                 tgcagctcagcagcctggcatctgaggacactgccgtctattattgtaatttttacgggg 301
                                                                                                                                                                                                                                                                GCCCAATATTCCAGGGCAGGGCCACTATAACAGCAGACACACCCTCCAACACAGTCTACC
                                                                                                                                                                                                                                                                                                                                    CTGAACAGGGCCTGGAATGGATTGGAAGGATTGATCCTGAGAATGATGAAACTAAATATG
                                                                                                                                                                                                                                                                                                                                                                                                        CCTGCACAGGTCCTGGCTTCAACATTGAAGACTACTATATTCACTGGGTGAAGCAGAGGA 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGATCCAGCTGCAGCAGTCTGGGGCAGAACTTGTGAAGCCAGGGGGCCTCAGTCAAGCTGT 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    644;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (E-mail:yoshikaw@amugw.aichi-med-u.ac.jp,
Tel:81-561-62-3311(ex.2265), Fax:81-561-62-9318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pathology; Yazako, Karimata 21, Nagakute, Aichi 480-1195, Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /translation="MEIQLQQSGAELVKPGASVKLSCTGPGFNIEDYYIHWVKQRTEQ
GLEWIGRIDPENDETKYGPIFQGRATITADTSSNTVLQLSSLTGSDTAVYSCALRGG
VYWGPGTTLYVSSGGGGSGGGGGGSHMDVWTQSPLTLSVAIGGSASJSKRSQS
LLDSDGKTYLNWLLQRPGQSPKRLISLVSKLDSGVPDRFTGSGSGTDFTLRISRVEAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xref="taxon:32630"
/note="cloned from mouse hybridoma producing 3C10
monoclonal antibody recognizing a type III mutant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note="encodes linker sequence"
391. .783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note="encodes heavy 346. .390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DLGIYYCWQGTHFPGTFGGGTKLEIKRSGGGGSGGGSIMRGSHHHHHHGMASMTGGQ
QMGRDLYDDDDKDPSSRSAAGTMEFEA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="encodes light chain variable 209 c 264 g 214 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /product="3C10 single chain antibody"
/protein_id="BAA82610.1"
/db_xref="GI:5596362"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="contains single chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    receptor"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /gene="3C10 scFv"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /gene="3C10 scFv"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'gene="3Cl0 scFv"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'gene="3Cl0 scFv"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'gene="3Cl0 scFv"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              organism⇒"synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                codon_start=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  77.5%;
87.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 565.2;
Pred. No. 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          construct"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  chain variable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .2e-164;
                                                                         -ggatgttttgatgacccaaactc 415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 912;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           domain'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                    475
                                                     418
                                                                                                                                                                                           302
                                                                                                                                                                                                                                                                                                                                    184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EGF
                                                                                                                                                                                                                                                                244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
XXU31739
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                misc_feature
                                                                                    misc_feature
                                                                                                                                                misc_feature
                                                   misc_feature
                                                                                                          misc_feature
                                                                                                                                                                                           misc_feature
                                                                                                                                                                                                                             misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    419 CACTCACTCTATCGGTCGCCATTGGACAATCAGCCTCCATCTCTTGCAAGTCAAGTCAGA 478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ctccaaagcgcctaatctatctggtgtctaaactggactctggagtccctgacaggttca 595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCTCTTAGATAGTGATGGAAAGACATATTTGAATTTGTTTACAGAGGCCAGGCCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCTGGAGATAAAA 732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          agctggaaatcaaa 729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tgggagtttattattgctggcaaggtacacattctccgctcacgttcggtgctggcacca 715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGGCAGTGGATCAGGGACAGATTTCACACTGAGAATCAGCAGAGTGGAGGCTGAGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTCCAAAGCGCCTAATCTCTCTGGTGTCTAAACTGGACTCTGGAGTCCCTGACAGGTTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gcctcttggatagtgatggaaagacatatttgaattggttgttacagaggccaggccagt 535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGGGAATTTATTATTGCTGGCAAGGTACACATTTTCCTGGGACGTTCGGTGGAGGGACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                XXU31739 864 bp DI
Single chain antibody SCA
U31739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Direct Submission
Submitted (17-JUI-1995) Francesco Nardone, Istituto di
parassitologia, University of Rome 'La Sapienza', Piazzale
Moro 5, Roma, RM 00185, Italy
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       artificial sequence.
1 (bases 1 to 864)
Nardone, F., Spano, F. and Crisanti, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               synthetic construct.
                                                                                                                       /note-
                                                                                                                                                                                                                                                               MTQTPLSLPISLGDQASISCRSSQSIVHSNGNTYLEWYLQRPGQSPKLLLLFKVSNRFS
GVPDRFSGSGSGTDFTLKITRVEAEDLGVYYCFQGSHLPYTFGGGTKLEIKRAAAEQK
                  /note="variable region 541. .588
                                                                                                                                                                                                                                                                                                /translation="MKYLLPTAAAGLLLLAAQPAMAEVQLQQSGAELVRSGASVQLSC
TASGENIKDEYIHWVKQRPEQGLEWIGCIDPESGDVEYAPKFQDKATMTTDTSSNTAY
LQLSGLTSGDTAVYFCNALILRESSAMDYWGQGTTVTVSSGGGGSGGGGSGGGGSDVL
                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="single chain antibody derived from
antibody against Plasmodium berghei Pbs21
                                                                                                                                                                                           /note="variable
157. .161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xref="taxon:32630"
1. .60
                                                                                                                                                                                                                                              LISEEDLNGAA"
                                                                                                                                                                                                                                                                                                                                                   /product="SCA 13.1"
/protein_id="AAA75173.1"
/db_xref="GI:975305"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="Pel B leader"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GI:975304
                                                                  note-
                                                                                                    /note="encodes
                                                                                                                                                                          /note=
                                                                                                                                                                                                                                                                                                                                                                                                    transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              . .864
                                                 e-"encodes
                                                                                                                       e="encodes .393
                                                                                                                                                                                                                                                                                                                                                                                                                     _start=1
                                                                                                                                                                          encodes
CDR 1"
                                                                   linker
                                                                                                    CDR 3"
                                                                                                                                       CDR
                                                                                                                                                                          CDR 1"
                                                                                                                                                                                                           region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13.1 gene, complete cds
                                                                   peptide'
                                                                                                                                                                                                             from
                                  from light chain"
                                                                                                                                                                                                           heavy chain"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     05-SEP-1995
```

```
MMVHVKFG
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
ORIGIN
                                                                                                                      Š
                                                                                                                                               밁
                                                                                                                                                                    Q
                                                                                                                                                                                               밁
                                                                                                                                                                                                                     Q
                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                      ğ
                                                                                                                                                                                                                                                                                               ₽
                                                                                                                                                                                                                                                                                                                      δã
                                                                                                                                                                                                                                                                                                                                               멍
                                                                                                                                                                                                                                                                                                                                                                      δã
                                                                                                                                                                                                                                                                                                                                                                                                DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              D,
                         DEFINITION
                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Вb
  ACCESSION
                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_feature
                                                                                                 788
                                                                                                                      710
                                                                                                                                                728
                                                                                                                                                                       650
                                                                                                                                                                                                 899
                                                                                                                                                                                                                        590
                                                                                                                                                                                                                                                 803
                                                                                                                                                                                                                                                                        530
                                                                                                                                                                                                                                                                                                548
                                                                                                                                                                                                                                                                                                                         470
                                                                                                                                                                                                                                                                                                                                                488
                                                                                                                                                                                                                                                                                                                                                                        410
                                                                                                                                                                                                                                                                                                                                                                                                428
                                                                                                                                                                                                                                                                                                                                                                                                                       350
                                                                                                                                                                                                                                                                                                                                                                                                                                                368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              83
                                                                                                                                                                                                                                                                                                                                             gcaccaagctggaaatcaaa 729
                                                                                                                                                             aggatttgggagtttattattgctggcaaggtacacattctccgctcacgttcggtgctg 709
                                                                                                                                                                                                             ggttcactggcagtggatcagggacagatttcacactgaaaatcaacagagtggaggctg
                                                                                                                                                                                                                                                GCCAGTCTCCAAAGCTCCTGCTCTTCAAAGTTTCCAACCGATTTTCTGGGGTCCCAGATA
                                                                                                                                                                                                                                                              gccagtctccaaagcgcctaatctatctggtgtctaaactggactctggagtccctgaca
                                                                                                                                                                                                                                                                                                GTCAGAGCATTGTACATAGTAATGGAAACACCTATCTAGAATGGTACCTGCAGAGACCAG
                                                                                                                                                                                                                                                                                                             gtcagagcctcttggatagtgatggaaagacatatttgaattggttgttacagaggccag
                                                                                                                                                                                                                                                                                                                                                                                                             gtggaggcggttcaggcggaggtggctctggcggtggcggatcggatgttttgatgaccc 409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tgcagctcagcatgcctggcatctgaggacactgccgtctattattgtaatttt------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctacc 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGACCAAGCTGGAAATCAAA 807
                                                                                                                                                AGGATCTGGGAGTTTATTACTGCTTTCAAGGTTCACATCTTCCGTACACGTTCGGAGGGG
                                                                                                                                                                                               GGTTCAGTGGCAGTGGATCAGGGACAGATTTCACACTCAAGATCACCAGAGTGGAGGCTG
                                                                                                                                                                                                                                                                                                                                                                                                GTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGATGTTTTGATGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                              TACGCTTCTCCTCTGCTATGGACTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ----tacggggatgctttggactattggggccaagggaccacggtcaccgtctcctcag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGCAGCTCAGCGGCCTGACATCTGGGGACACTGCCGTCTATTTCTGTAATGCTCTAATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCCCAAAGTTCCAGGACAAGGCCACTATGACTACAGACACCATCCTCCAACACAGCCTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGAACAGGGCCTGGAGTGGATTGGATGCATTGATCCTGAGAGTGGTGATGTTGAATATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCTGCACAGCTTCTGGCTTCAACATTAAAGACTTCTATATACACTGGGTGAAGCAGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            631;
MMVHVKFG 747 bp DNA ROD 26-NOV-19 M.muscullus Vh/Vk fusion gene for antibody heavy/kappa chain variable region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 634. .654
/note="encodes (751. .774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   751. .774
/note="encodes CDR 3"
811. .864
/note="encodes C-myc peptide"
a 222 c 234 g 203 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          75.68;
85.38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 550.8; DB 12
Pred. No. 3.7e-160;
0; Mismatches 97;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                   26-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      864;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                        469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     349
                                                                                                                                                                                                                                                667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              187
                                                                                                                                                787
                                                                                                                                                                                               727
                                                                                                                                                                                                                        649
                                                                                                                                                                                                                                                                        589
                                                                                                                                                                                                                                                                                                607
                                                                                                                                                                                                                                                                                                                        529
                                                                                                                                                                                                                                                                                                                                                547
                                                                                                                                                                                                                                                                                                                                                                                                487
                                                                                                                                                                                                                                                                                                                                                                                                                                                427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ۲,
```

```
BASE COUNT
ORIGIN
                                                                                                                       g
                                             ... D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
MEDLINE
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
REFERENCE
AUTHORS
TITLE
JOURNAL
                        . 0
                                                                                     Ϋ́Q
                                                                                                                                                   δÃ
                                                                                                                                                                                   В
                                                                                                                                                                                                                 О
У
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                       misc_recomb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            V_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                         121
181
                             18T
                                                  121
                                                                                                                       5
                                                                                                                                                     61
                                                                                                                                                                                   Н
                 gccccgaagtt.ccagggcaaggccactatgactgcagacacatcctccaatacagcctac
                                                                          cctgaacagggcctggagtggattggatggattgatcctgagaatggtgatactgaatat 180
                                                                                                                      tectgeacagettetggetteaacattaaagaetaetatatgeaetgggtgaageagagg
                                                                                                                                                                                                     CCTGAAAAGGGCCTGGAGTGGATTGGCAGGATTGCTCCTGCGAGTGGTAATGTTAAATAT
                                                                                                                                                                                     CAGGTGCAGCTGCAGCAGTCTGGAGCTGAGCTTGTGAGGCCAGGGGCCTCAGTCAAGTTG
GTCCCGAGGTTCCAAGACAAGGCCACGATTACTGCAGACACATCCTCCAACACAGCCTAC
                                                                                                                                                                                                                                                 11 Similarity 81.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Revised by author 26-NOV-96

3 (bases 1 to 747)
Artsaenko,O., Peisker,M., zur Nieden,U.,
Muntz,K. and Conrad,U.
Expression of a single-chain Fv antibody
Creates a wilty phenotype in transgenic t
Plant. 1. 8 (5), 745-750 (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Construction and functional characterization of a antibody binding to the plant hormone abscisic acts plant Physiol. 144, 427-429 (1994)

Chases 1 to 747)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Direct Submission
Submitted (10-JAN-1994) Artsaenko Cand Crop Plant Research, Molecular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    D-06466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 (bases 1 to 747)
Artsaenko, O., Weile
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Vertebrata; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  z29480.1 GI:1694842
anti-abscisic acid a
chain; immunoglobuli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        96086099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Artsaenko,O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     house mouse
                                                                                                                                                                                                                                                                                                                                             163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28, 1996 this sequence version Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  immunoglobulin
                                                                                                                                                                                                                                                                                                                                             þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gatersleben,
                                                                                                                                                                                                                                                                                                                                                                         AEDMGVYYCMQHREYPLTFGAGTKLELKRAA"
358. 402
note="linker sequence"
                                                                                                                                                                                                                                                                                                                                            /organism="synthetic construct" 183 c 218 g 183 t
                                                                                                                                                                                                                                                                                                                                                                                                                      /translation="OVOLOGSAELVRPGASVKLSCTASGFNEKEDDY.HWVKQRPEKG
LEWIGRIAPASGNVKYVPRFODKATITADTSSNTAYLLLSSLTSEDTAVYYCAR.25T.
YTSLCYWGGGTTVTVSSWGGGSGGGGSGGGSDIELTOSPSVVVIPGESVSISCRSS
KSLLYSDGDSYLFWFLQRPGQSPQLLIYRMSNLASGVPDRFSGSGSGTSFTLRISRVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /standard_name="Vh/Vk fusion"
/note="binding abscisic acid"
/product="single chain Fv antibody"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone="Anti abscisic acid Single chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Mus musculus"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /protein_id="CAA82617.1"
/db_xref="GI:1694843"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /codon_start=1
/product="single chain
                                                                                                                                                                                                                                                                68.6%;
81.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   antibody;
lin kappa c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Germany
                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                 Score 500.4; DB 11;
Pred. No. 1.8e-144;
0; Mismatches 131;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; fusion gene; immunoglobulin heavy chain; immunoglobulin variable reg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fv antibody'
                                                                                                                                                                                                                                               1.8e-144;
hes 131;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                O., Institute of Plant Genetion Cell Biology, Corrensstrasse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          replaced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      y against
tobacco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fiedler,U.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mammalia;
Mus.
                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           f a single
acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gi:902353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              F۷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       abscisic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eutheria;
                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Weiler, E.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Genetics
sstrasse 3,
                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           chain
                             240
                                                                                                                       120
                                                                                                                                                      120
                                                                                                                                                                                     60
240
                                                          180
                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ۲
                                                                                                                                                                                                                                                 ļ.
```

7

```
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT
XXU44796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FOCUS
                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                            CDS
                                                                                                                                                        misc_feature
                                                                                                                                                                                       V_region
                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ttttacggggatgctttggactattggggccaagggaccacggtcaccgtctcctcaggt 351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       accaagctggaaatcaaa 729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gatttgggagtttattattgctggcaaggtacacattctccggttcacgttcggtgctggc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ttcactggcagtggatcagggacagatttcacactgaaaatcaacagagtggaggctgag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cagagcctcttggatagtgatggaaagacatatttgaatttggttgttacagagggccaggc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           actccactcacttgtcggttaccattggacaaccagcctccatctcttgcaagtcaagt 471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ctgcagctcagccagcctggcatctgaggacactgccgtctattattgt-----aat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCAAGCTGGAGCTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GATATGGGTGTTTATTACTGTATGCAACATCGAGAGTACCCGCTCACGTTCGGTGCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTCAGTGGCAGTGGGTCAGGAACTAGTTTCACACTGAGAATCAGTAGAGTGGAGGCTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGTCTCCTCAGCTCCTGATATCGGATGTCCAACCTTGCCTCAGGAGTCCCAGACAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cagtotocaaagogoctaatotatotggtgtotaaaotggactotggagtocotgacagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAGAGTCTCCTGTATAGTGATGGCGACTCTTACTTATTTTGGTTCCTGCAGAGGCCAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCTCCACCCTCTGTAGTTGTCATTCCTGGAGAGTCAGTATCCATCTCCTGCAGGTCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGCTGCTCAGCAGCCTGACATCTGAGGACACTGCCGTCTATTACTGTGCTAGAAGGGAT
                                                                                                                                                                                                                                                                                                                                                             artificial sequence.
1 (bases 1 to 732)
Guesdon, J.-L. and Muller, B.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mRNA,
U44796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       XXU44796 732 bp mRNA SYN 03-FEB-1996
Synthetic construct single-chain anti-acetylaminofluorene antibody
MRNA, from PCR amplified mouse VH and VL regions, partial cds.
                                                                                                                                                                                                                                                                                                                Submitted (05-JAN-1996) Jean-Luc Guesdu Docteur Roux, Paris, 75015, France
                                                                                                                                                                                                                                                                                                                                                 Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                            U44796.1 GI:1177222
                                                                                                                                                                                                                                                                                                                                                                                                              synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                              synthetic
                                                                                                                                                                                                   /note-"from mouse hybridoma K16-16 anti-acetylaminofluorene; single-ci from PCR amplified VH and VL region
                                                                                                                          /note="synthetic <1. .>732
/translation-"QVQLQQSGAELAKPGASVKMSCKASGYTFTTYWMHWVKQRPGQG
/translation-"QVQLQQSGAELAKPGASVKMSCKASGYTFTTYWMHWVKQRPGQG
                             /transi_table=11
/transi_table=11
/product="scFv anti-acetylaminofluorene"
/protein_id="AAA86761.1"
/db_xref="G1:1177223"
                                                                                                                                                                                                                                                    /organism="synthetic construct"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                             /codon_start=:
                                                                                                          /note="single-chain antibody"
                                                                                                                                                                       note="heavy chain V(D)J region"
                                                                                                                                         primer"
                                                                                                                                                                                                                                                                                                                                 Guesdon,
                                                                                                                                                                                                      single-chain
VL regions*
                                                                                                                                                                                                                                                                                                                                  Institut Pasteur,
                                                                                                                                                                                                                      antibody
                                                                                                                                                                                                                      produced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                291
                                                                                                                                                                                                                                                                                                                                  28, rue
```

```
Db ,
                                RESULT S
                                                                                                                    В
                                                                             g
                                                                                                γg
                                                                                                                                            γQ
                                                                                                                                                                    B
                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                 ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Вb
      DEFINITION
                                                                                                                                                                                                                                   ş
                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                     γ
                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
ORIGIN
                        LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 571; Conserv
                                                                          721
                                                                                                                                                                                                                                                           481
                                                                                                  721
                                                                                                                     661
                                                                                                                                             661
                                                                                                                                                                    109
                                                                                                                                                                                         601
                                                                                                                                                                                                               541 CAGCTCCTGATCTACAGGGTTTCCAACCGATTTTCTGGGGTCCTAGACAGGTTCAGTGGT
                                                                                                                                                                                                                                     541
                                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Н
                                             ص.
                                                                            GAGCTGAAA 729
                                                                                                                                                                  aagcgcctaatctatctggtgtctaaactggactctggagtccctgacaggttcactggc
                                                                                                                                                                                                                                                                     ttggatagtgatggaaagacatatttgaattggttgttacagaggccaggccagtctcca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              teetgeacagettetggetteaacattaaagaetaetatatgeactgggtgaageagagg 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 caggtgcagctgcagtctggggcagagcttgtgaggtcagggggcctcagtcaagttg
                                                                                         gaaatcaaa
|| | |||
                                                                                                                        GTTTATTTCTGCCTCCAACTTACACATGTCCCGTACACGTTCGGAGGGGGGGACCAAGCTG
                                                                                                                                     gtttattattgctggcaaggtacacattctccgctcacgttcggtgctggcaccaagctg
                                                                                                                                                                                                                                                          GAAAACAGTAATGGAAACACCTATTTGAACTGGTACCTCCAGAAACCAGGCCAGTCTCCA
                                                                                                                                                                                                                                                                                                                actitgtcggitaccattggacaaccagcctccatctcttgcaagtcaagtcaagtcatcl
                                                                                                                                                                                                                                                                                                                                                              gatgctttggsgctattggggccaagggaccacggtcaccgtctcctcaggtggaggcgt
                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGCÁACTGAGCAGCCTGACATCTGAAGACTCTGCAGTCTATTACTGTGCAAGAGGAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                    gccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGGTGCAGCTGCAGCAGTCTGGGGGCCTGAACTGGCCAAAACCTGGGGGCCTCAGTGAAGATG
                                                                                                                                                                                                                                                                                                      TCCCTGCCTGTCAGTCTTGGAGATCAAGCCTCCATCTTTGCAGGTCTAGTCAGAGCCTT
                                                                                                                                                                                                                                                                                                                                                CTATACGGAAACTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTCAAGTGGAGGCGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AATCAGAAGTTCAAGGACAAGGCCACATTGACTGCAGACAAATCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCCTGCAAGGCTTCTGGCTACACCTTTACTACCTACTGGATGCACTGGGTAAAACAGAGG
ACO131533
Synthetic c
containing
                                                             Ļ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                 729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ۵
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GNYWGQGTTVTVSSSGGGSGGGGGGGGGDIELTQSPFSLPVSLGDQASISCRSSQS:
ENSWGNTYLNWYLOKPGQSPQLLIYRVSNKFSGVLDRFSGSGSGTDFTLKISRVEAED
LGYVFCLQLITHVPYTFGGGTKLELKR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note-
393. .732
/note="light /
182 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="synthetic linker/primers"
393. .732
 construct for an
g linker sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          65.3%;
78.3%;
                        747
                       ďď
             for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 476.2; DB 12; Pred. No. 5.9e-137; O; Mismatches 158;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 chain
199 g
            anti-p53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   region"
             SCFV
            antibody
                       SYN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
            (scFvllD3)
                       16-MAR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                              540
                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                  360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                        720
                                                                                                                                                                   660
                                                                                                                                                                                         660
                                                                                                                                                                                                               600
                                                                                                                                                                                                                                    600
                                                                                                                                                                                                                                                          540
                                                                                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                              300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60
                                                                                                                                             720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

•

. .

```
BASE CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
KEYWORDS
  멍
                          δÃ
                                                         밁
                                                                             δõ
                                                                                                               밁
                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
MEDLINE
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                        COUNT
                                                                                                                                                                                                                                                                                                                            V_region
                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                      misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                           V_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                             121
  121
                                                                                                                                                                                  Local
                                                          61
                                                                                   61
                                                                                                               ш
                                                                                                                                           \mathbf{L}
artificial sequence.

1 (bases 1 to 747)

Caron de Fromentel, C., Gruel, N., Venot, C., Debussche, L.,
Caron de Fromentel, C., Teillaud, J.L., Tocque, B. and Brac
Conseiller, E., Dureuil, C., Teillaud, J.L., Tocque, B. and Brac
Restoration of transcriptional activity of p53 mutants in hu
tumour cells by intracellular expression of anti-p53 single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Direct Submission
Submitted (16-DEC-1998) de Fromentel C., U 380 INSERM,
Cochin de Genetique Moleculaire, 22 rue Mechain PARIS,
FRANCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     synthetic construct. synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AJ131533
AJ131533.1
                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Oncogene 18 (2), 551-557 (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 antibody; immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99124402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fromentel,C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          bases 1 to 747)
                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /product="auti-p53 ScFv antibody (scFv11D3)"
/protein_id="CAA10386.1"
/protein_id="CAA10386.1"
/db_xref="G1:403868"
/translation="QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEG
/translation="QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEG
/translation="QVKLQESGAELVRASTASATHASGTSEDTTYYYCNAVIYY
EXBGYALDYWGQGTTVTYSSGGGGSGGGGSGGSDIELITQSPSSLAVSAGEKVAMSC
KSSQSLENSRTTRKNYLAWYQQKDGQSFKYLIYWASTRESGVPDRFTGSGSGTDFTLTI
SSVQAEDLAVYYCKQSYNLPTFGGGTKLEIK"
                                                                                                                                                                                                                                                                                                                             /note=
                                                                                                                                                                                                                                                                                                 /product
                                                                                                                                                                                                                                                                                                                                                        /organism="Mus musculus"
/db_xref="taxon:10090"
123. .137
                                                                                                                                                                                                                                                        /organism="Mus musculus"
/db_xref="taxon:10090"
188 c 205 g 16
                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Mus musculus"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                              /product="immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'note="synthetic"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      focus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'cell_type="hybridoma"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               organism="synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GI:4033867
                                                                                                                                                                                    63.2%;
79.2%;
                                                                                                                                                                                                                                                                                                             -"immunoglobulin
                                                                                                                                                                                                                                                                                                                                       inker sequence"
                                                                                                                                                                 Score 460.8; Pred. No. 3.6e-10; Mismatches
                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                superfamily;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              construct"
                                                                                                                                                                                                                                                          165
                                                                                                                                                                     DB 12;
.6e-132;
nes 132;
                                                                                                                                                                                                                                                                                                               light
                                                                                                                                                                                                                                                                                                                                                                                                              heavy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SCFV;
                                                                                                                                                                                                                                                                                                                chain
                                                                                                                                                                                                                                                                                                                                                                                                              chain
                                                                                                                                                                      Indels
                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 variable
                                                                                                                                                                                                                                                                                                                variable
                                                                                                                                                                                                                                                                                                                                                                                                               variable
                                                                                                                                                                        24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            e,L.,
and Bracco,L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Institut
75014,
                                                                                                                                                                     Gaps
                                                                                                         .66
                                                                                                                                           60
```

```
REFERENCE
AUTHORS
TITLE
JOURNAL
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                      KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                DEFINITION
ACCESSION
VERSION
                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 1
AF064776
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VQ
                                                                                                                                                                                                                                                                                                                                                                                                          LOCUS
                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                         source
                                                                                             ; .t.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ttcggtgctggcaccaagctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gtccctgacaggttcactggcagtggatcagggacagatttcacactgaaaatcaacaga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAATCCAGTCAGAGTCTGTTCAACAGTAGAACCCGAAAGAATTACTTGGCTTGGTATCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            atgacccaaactccactctgtcggttaccattggacaaccagcctccatctcttgc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTCGGCGGGGCACCAAGCTGGAAATCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTGCAGGCTGAAGACCTGGCAGTTTATTACTGCAAGCAA---TCTTATAATCTACCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gtggaggctgaggatttgggagtttattattgctggcaaggtacacattctccgctcacg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTCCCTGATCGCTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGAAACCAGÚGCAGTCTCCTAAAGTGCTGATCTACTGGGCATCCACTAGGGAATCTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cagaggccaggccagtctccaaagcgcctaatctatctggtgtctaaactggactctgga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    aagtcaagtcagagcctcttgga---tagtgatggaaagacatatttgaatttggttgtta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTCACCCAGTCTCCATCTTCCCTGGCTGTCAGCAGGAGAGAAGGTCGCTATGAGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGCACCTCAGCAGCCTGACATCTGAGGACACAACCGTCTATTACTGTAATGCAGTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ctgcagctcaycagcctggcatctgaggacactgccgtctattattgtaat------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCCCCGAACTTCCAGGGCAAGGCCACTGTGACTGCAGACACATCCTCCAACACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCCTCAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGACATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TACTATGAATACGACGGCTATGCTTTGGACTACTGGGGCCAAGGGACCACGGTCACCGTC
                                                                                                                                                                                                                                                                                                                                                                Synthetic Mus
AF064776,
AF064776.1 GI
                                                                                                                                                                                Tewari,D., Zhou,P. and Notkins,A.L. Direct Submission Submitted (12-MAY-1998) National Institutes of Health, 9000
                                                                                                                                                                                                                                     artificial sequence.

1 (bases 1 to 738)

Tewari,D., Goldstein,S., Notkins,A.L.

Single chain antibody to HIV-1 p17

J. Immunol. (1998) In press

2 (bases 1 to 738)
                                                                                                                                                                                                                                                                                                                           synthetic
                                                                                                                                                                                                                                                                                                                                        synthetic
                                                                                                                                                                                                                                                                                                                                                                                                          AF064776
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ttttacggggatgctttggactattggggccaagggaccacggtcaccgtc
/codon_start=1
./transl_table=11
./product="anti HIV-1 p:
./protein_id="AAC16888.
                                                                   /organism="synthetic construct"
//db_xref="taxon:32630"
/db_xref="ATCC:HB8975"
/note="derived from Mus musculus
HIV-1_p17 (ATCC HB8975)"
                                                                                                                                                      ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                        construct
                                                                                                                                                                                                                                                                                                                                                                   GI:3142707
                                                                                                                                                                                                                                                                                                                                                                                            musculus
                                                                                                                                                                                                                                                                                                                                                                                                            738
                                                                                                                                                                                                                                                                                                                                                                                                            ďď
                                                                                                                                                                                                                                                                                                                                                                                               anti HIV-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          729
                                                                                                                                                                                 Institute of 000 Rockville
                                                                                   musculus monoclonal antibody
                                                                                                                                                                                                                                                                                                                                                                                          p17
                                                                                                                                                                                                                                                                                                                                                                                             SCFV
                                                                                                                                                                                                                                                                                  and
                                                                                                                                                                                                                                                                                                                                                                                               mRNA,
                                                                                                                                                                                                                                                                                                                                                                                             21-MAY-1998
complete cds
                                                                                                                                                                                                Research,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          291
                                                                                     ូ
                                                                                                                                                                                    ₹
```

```
DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
ORIGIN
                                 RESULT
A68604
LOCUS
                                                                                                                                                            γ
                                                                                            밁
                                                                                                                δõ
                                                                                                                                       밁
                                                                                                                                                                                      밁
                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                      ρ
                                                                                                                                                                                                                                                                                                                                 뮍
                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δδ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 565
                                                                                                                                                              661
                                                                                                                                                                                      607
                                                                                                                                                                                                             601
                                                                                                                                                                                                                                     547
                                                                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                                                                                 427
                                                                                            727
                                                                                                                 721
                                                                                                                                          667
                                                                                                                                                                                                                                                                                    487
                                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                                                367
                                                                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10
                                                           11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAGGAAAGAGTTAAAGTGGATGGGTTGGATAAACACCTACACTGGAGAGCCAACATAT
                                                                                                                                                                                   agtggatcagggacagatttcacactgaaaatcaacagagtggaggctgaggatttggga
                                                                                                                                                                                                                                  actttgtcggttaccattggacaaccagcctccatctcttgcaagtcaagtcagagcctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cctgaacagggcctggagtggattggattggattcctgagaattggtgatactgaatat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              caggtgcagctgcagcagtctggggcagagcttgtgaggtcaggggcctcagtcaagttg
                                                                                            GAAATCAAA
                                                                                                           gaaatcaaa
                                                                                                                                       TTAGGTAGTGATGGAAAGACATTTTTGAATTGGTTGTTACAGAGGCCAGGCCAGTCTCCA
                                                                                                                                                                                                                                                                                            ttggatagtgatggaaagacatatttgaattggttgttacagagggccaggccagtctcca
                                                                                                                                                                                                                                                                                                                                                                               TCTGGAGGTGGCGGGTCCGGCGGTGGAGGGTCGGATGTTGTGATGACCCAGACTCCACTC
                                                                                                                                                                                                                                                                                                                                                                                           tcaggcggaggtggctctggcggtggcggatcggatgttttgatgacccaaactccactc
                                                                                                                                                                                                                                                                                                                                                                                                                            AAAGGTT----CTTACTGGGGCCCAAGGGACTCTGGTCACTGTCTCTGCAGGTGGCGGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                          gatgctttggactattggggccaagggaccacggtcaccgtctcctcaggtggaggcggt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCTGATGAATTCAAGGGACGGTTTGCCTTTTCTTTGGAAACCTCTGCCAGCACTGCCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGATCCAGTTGGTGCAGTCTGGACCTGAGCTGAAGAAGCCTGGAGAGACAGTCGAGATC
                                                                                                                                                                                                                                                                                                                                 ACTTTGTCGGTTACCATTGGACAACCAGCCTCCATTTCTTGTAAGTCAAGTCAGAGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCCTGCAAGGCCTCTGGATATACCTTCACAGACTATGGAATGAACTGGATGAAACAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  al Similarity
565; Conserv
A68604
Sequence
A68604
A68604.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                  729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         വ
                                                                                            735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db_xref="GI:3142708"
/translation="MAAQIQLVQSGPELKKPGETVEISCKASGYTFTDYGMNWMKQAP
/translation="MAAQIQLVQSGPELKKPGETYEISCKASGYTFTDYGMNWMKQAP
GRSLKWM6WINTYTGEPTYADEFKGRFAFSLETSAFTAYLQINNIKSEDMATYFCSRS
MKGSYWGQGTLLYTYAAGGGGSGGGGSGVVMTQTPLTLSVTIGQPASISCKSSQ
SLIGSDGKTLIWILQRPGQSFKRLIYLYKKLDSGVPDRFTGSGSGTDFTLKISRVEA
EDLGVYYCWQGTHLPQTFGGGTKLEIK"
a 155 c 207 g 185 t
                    4 from Patent
 GI:4759633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             62.5%;
77.5%;
                                  ďď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 455.4; DB 12;
Pred. No. 1.7e-130;
0; Mismatches 161;
                       WO9749726.
                                  PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                  06-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ω,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
                                                                                                                                                              720
                                                                                                                                                                                                            660
                                                                                                                                                                                                                                   606
                                                                                                                                                                                                                                                                                                                                                                                                                            366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     129
                                                                                                                                       726
                                                                                                                                                                                      666
                                                                                                                                                                                                                                                                                  546
                                                                                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                                                                                 486
                                                                                                                                                                                                                                                                                                                                                       480
                                                                                                                                                                                                                                                                                                                                                                               426
                                                                                                                                                                                                                                                                                                                                                                                                     420
                                                                                                                                                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
```

```
, dd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
SOURCE
ORGANISM
                                                        ,
Aō,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
ORIGIN
                                                                                                                                                   δÃ
                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                    멍
                                                                                                       Ş
                                                                                                                               밁
                                                                                                                                                                        밁
                                                                                                                                                                                                                ď
                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                           595
                                    706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                    646
                                                                                                        535
                                                                                                                              589
                                                                                                                                                   475
                                                                                                                                                                        529
                                                                                                                                                                                            415
                                                                                                                                                                                                                 469
                                                                                                                                                                                                                                       355
                                                                                                                                                                                                                                                            409
                                                                                                                                                                                                                                                                                295
                                                                                                                                                                                                                                                                                                     349
                                                                                                                                                                                                                                                                                                                                                289
                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                         229
                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                  169
                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            109
   766
                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
tctccaaagcgcctaatctatctggtgtctaaactggactctggagtccctgacaggttc
                                                                                                                                                                                                                                                                                                   CCTGAACAGGGCCTGGAGTGGAATGGAAGGATTGAACCTGCGAATGGTAATACTAAATAT 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      caggtgcagctgcagcagtctggggcagagcttgtgaggtcaaggggcctcagtcaagttg
                                                                                    CCACCCAAACTCCTCATCAAGTATGCATCCAACCTAGAATCTGGGGTCCCTGCCAGGTTC
                                                                                                                                         agcctcttggatagtgatggaaagacatatttgaattggttgttacagaggccaggccag
                                                                                                                                                                                  ccactcactttgtcggttaccattggacaaccagcctccatctcttgcaagtcaagtcag
                                                                                                                                                                                                                                                                    tacggggatg:tttggactattggggccaagggaccacggtcaccgtctcctcaggtgga
                                                                                                                                                                                                                                                                                                                                                                                                                                          tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg
                                                                                                                                                                       99c99ttcagycggaggtggctctggcggtggcggatcggatgttttgatgacccaaact
                                                                                                                                                                                                                                                          TATGATTATCCTTTTCCTTACTGGGGCCAAGGGACCTCGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                   TCCTGCACAGCTTCTGGCTTCAACATTAAAGACACCTATATGCACTGGGTGAAGCAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGGTGCAGCTGCAGGAGTCTGGGGGCAGAGCTTGTGAAGCCAGGGGGCCTCAGTCAAGTTG
                                                                                                                             AGTGTC---AGTACATCTAGGTATAGTTATATGCACTGGTACCAACAGAAACCAGGACAG
                                                                                                                                                                                                                 573;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Aspergillus clavatus.
Aspergillus clavatus.
Aspergillus clavatus
Eukaryota; Fungi; Ascomycota; Euascomycete
Eurotiales; Trichocomaceae; mitosporic Tri
1 (bases 1 to 1314)
Mele, A., De, S.R., Parente, D. and Colnaghi,
RECOMBINANT RIBOSOMAL INHIBITOR PROTEIN (F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IMMUNOÇONJUGATE
Patent: WO 9749726-A 31-DEC-1997;
MINISTERO UNI RICERCA SCIENT E (IT)
Other publication IT E1960155 19971229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                62
78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ascomycota; Euascomycetes; Plectomycetes; ocomaceae; mitosporic Trichocomaceae; Aspe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 452.2; DB 81;
Pred. No. 1.8e-129;
0; Mismatches 153;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    clavatus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (RIP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ĸ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Aspergillus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                     714
                                          765
                                                               654
                                                                                                       594
                                                                                                                             645
                                                                                                                                                                      588
                                                                                                                                                                                            474
                                                                                                                                                                                                                                    414
                                                                                                                                                                                                                                                           468
                                                                                                                                                                                                                                                                                                     408
                                                                                                                                                                                                                                                                                                                                             348
                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            168
                                                                                                                                                  534
                                                                                                                                                                                                                 528
                                                                                                                                                                                                                                                                               354
                                                                                                                                                                                                                                                                                                                         294
                                                                                                                                                                                                                                                                                                                                                                                                                                  228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ۲,
```

```
JOURNAL
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 12
SCO250763
  밁
                     Qy
                                                                                                    BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   80
                                          Query Match
Best Local Sim
Matches 572;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                        CDS
                                                                                                                                                                   V_region
                                                                                                                                                source
                                                                                                                                                                                           misc_feature
                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                  V_region
                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                826
   17
aagctggaaatcaaa
||||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAGCTGGAGCTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (01-NOV-1999)
Medizinische Hochschule
Hannover, GERMANY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Selection of phage-displayed anti-guinea pig
and their application in xenotransplantation
MO1. Immunol. 38, 1235-1247 (1999)
2 (bases 1 to 759)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus synthetic construct for anti-guinea antibody, clone D10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                synthetic construct.
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      antibody; heavy chain;
ScFv; variable region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Link
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        artificial sequence.

1 (bases 1 to 759)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AJ250763
AJ250763.1 GI:6272278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SC0250763
                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Koehl, J.
                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hawlisch, H.,
                                                                                                                                                                                         /organism="Mus musculus"
/db_xref="taxon:10090"
376. .420
                                                                                                                                                                                                                                                                                          /product="anti-guinea pig C5 ScFv antibody"
/protein_id="CAB60136.1"
/protein_id="CAB60136.1"
/db_xref="G1:6272279"
/translation="QPAMAEVQLQQSGAALARPGASVKLSCRASGYTFSSYWLQWVKQ
/translation="QPAMAEVQLQQSGAALARPGASVKLSCRASGYTFSSYWLQWVKQ
RPGGGLEWIGAFYPGGDTRYNQKFKGKATWTADKSSTTAYMQLTILSSEDSAVYYCA
RYGDYLYGMDYWGQGTSVTVSSGGGGSGGGGSGGGSDVVMTQTPLSLPVSLGDQAS
ISCRSSGSLVHSSNGNTYLHWYLQKPGGSPKLLIXKVSNKFSGVPDRFSGSGSGTDFTL
KISKYEAEDLGVYFCSQSTHYPWTFGGGTKLEIKR"
                                                                                                              /organism="Mus musculus"
/db_xref="taxon:10090"
183 c 213 g 18
                                                                                                                                               /produc
420. .7
                                                                                                                                                                                                                                     /prod
                                                                                                                                                                                                                                                             /organism="Mus musculus"
/db_xref="taxon:10090"
                                                                                                                                                                                 /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="synthetic construct'
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                       /transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                            'note="synthetic"
                                                                                                                                                                                                                                                                                                                                                                                                                                           clone="D10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                  focus
                                                                                                                                                                                                                                                                                                                                                                                                                        .>759
                                                        61.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                840
                                                                                                                                                                                                                                        uct="immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         759 bp
                                                                                                                                                          t-"immunoglobulin
                                                                                                                                                                              Gly4Ser)3 linker sequence"
                                             0,
                                             Score 446.4; DB 12;
Pred. No. 1.1e-127;
0; Mismatches 156;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Meyer zu Vilsendorf, A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 immunoglobulin superfamily; light
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Link C., Medizinische Mikrobiologie, Hannover, Carl-Neuberg-Str. 1, 30625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mRNA
                                                                                                                                                          light chain
                                                                                                                ď
                                                                                                                                                                                                                                        heavy
                                                                                                                                                                                                                                        chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAS
                                             Indels
                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C5
                                                                                                                                                          variable
                                                                                                                                                                                                                                        variable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gyleruez,S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           မ္
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11-MAY-2000
pig C5 ScFv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C5a antibodies
                                             12;
                                                                                                                                                                                                                                        region'
                                                                                                                                                          region'
                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nagel, E
                                              N
  BASE COUNT
                                                                                                   REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                       RESULT 1
AX003776
                                                                                                                                                          SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                       ρy
                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    멍
                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
                                                        FEATURES
                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                              VERSION
                                                                                                                                                                                                                              LOCUS
                                                                             JOURNAL
                                             source
                                                                                                                                                                                                                                                                                                                                 677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    410
                                                                                                                                                                                                                                                                                    737
                                                                                                                                                                                                                                                                                                        710
                                                                                                                                                                                                                                                                                                                                                      650
                                                                                                                                                                                                                                                                                                                                                                            617
                                                                                                                                                                                                                                                                                                                                                                                                   590
                                                                                                                                                                                                                                                                                                                                                                                                                        557
                                                                                                                                                                                                                                                                                                                                                                                                                                              530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           62
                                                                                                                                                                                                                                                                                                gcaccaagctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ga--
                                                                                                                                                                                                                                                                                    GCACCAAGCTGGAAATCAAA
                                                                                                                                                                                                       AX003776
Sequence
AX003776
                                                                                                                                                          Mus sp.
                                                                                                                                                                                            AX003776.1
            : 171
                                                                                                                                                                                                                   70
```

```
ccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctacc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ggttcactggcagtggatcagggacagatttcacactgaaaatcaacagagtggaggctg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gtcagagcctcttggatagtgatggaaagacatatttgaattggttgttacagaggccag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           aaactccactcactttgtcggttaccattggacaaccagcctccatctcttgcaagtcaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ctgaacagggxctggagtggattggatggattgatcctgagaatggtgatactgaatatg 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCTGCAGGGCCTCTGGCTACACCTTTAGTAGTATTGGCTGCAGTGGGTAAAACAGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cotgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagaggc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      aggatttgggagtttattattgctggcaaggtacacattctccgctcacgttcggtgctg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gccagtctccaaagcgcctaatctatctggtgtctaaactggactctggagtccctgaca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTCAGAGCCTTGTACACAGTAATGGAAACACCTATTTACATTGGTACCTGCAGAAGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGACTCCACTCTCCCTGCCTGTCAGTCTTGGAGATCAAGCCTCCATCTCTTGCAGATCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -----atgctttggactattggggccaagggaccacggtcaccgtctcctcaggtg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGGATCTGGGAGTTTATTTCTGCTCTCAAAGTACACATGTTCCGTGGACGTTCGGTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGTTCAGTGGCAGTGGATCAGGGACAGATTTCACACTCAAGATCAGCAGAGTGGAGGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCCAGTCTCChaagctccpgatctacaaagtttccaaccgatttctggggtcccagaca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACTACCTCTATGGTATGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTCAGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGCAACTCACCATCTTGTCATCTGAGGACTCTGCGGTCTATTACTGTGCAAGATATGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tgcagctcagcagcctggcatctgaggacactgccgtctattattgtaatttttacgggg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATCAGAAGTTCAAGGGCCAAGGCCACAATGACTGCAGATAAATCCTCCACTACAGCCTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGGACAGGGZCTGGAATGGATTGGGGCTTTTTATCCTGGAGATGGTGATACTCGCTATA
                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; 1 (bases 1 to 753)
Kufer,P. and Raum,T.
                                                                                                                        Method of identifying binding sit of binding to an epitope patent: WO 9925818-A 27-MAY-1999;
                                                                                                    KUFER PETER (DE); RAUM TOBIAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
    /db_xref="taxon:10095"
188 c 215 g
                                        organism="Mus sp.
                                                                                                                                                                                                                                                                                                                                                                          753 bp
from Patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      756
215 g
                                                                                                                                                                                                                                                                                                                                                                            DNA
WO9925818
                                                                                                                                                                  site
                                                                                                         (DE)
      179
                                                                                                                                                                     domains
                                                                                                                                                                                                                                                                                                                                                                                                 ROD
                                                                                                                                                                     that
                                                                                                                                                                     retain
                                                                                                                                                                                                                                                                                                                                                                                                 24 - AUG - 2000
                                                                                                                                                                                                                                                    Euteleostomi;
                                                                                                                                                                                                                                 Murinae;
                                                                                                                                                                     the capacity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                 Mus.
```

'n

ρ.

```
KEYWORDS
SOURCE
ORGANISM
                                                                                                             DEFINITION
ACCESSION
VERSION
                                                                                                                                                                   RESULT
A45006
                                                                                                                                                     POCUS
                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Ma
Best Loc
Matches
                  AUTHORS
TITLE
     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                       489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             189
                                                                                                                                                                                                                                                                           669
                                                                                                                                                                                                                                                                                                                                609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    186
                                                                                                                                                                                                                       729
                                                                                                                                                                                                                                               705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACCCAGACTCCACTCTCCCTGCCTGTCAGTCTTGGAGATCAAGCCTCCATCTCTTGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ---taatttttacggggatgctttggactattggggccaagggaccacggtcaccgtctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              acagggcctggagtggattggatggattcctgagaatggtgatactgaatatgcccc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gcagctgcagcagtctggggcagagcttgtgaggtcaaggggcctcagtcaagttgtcctg
                                                                                                                                                                                                                    tgctggcaccaagctggaaatcaaa
| || |||||||| || ||||||
aggggggaccaagcTTGAGATCAAA
                                                                                                                                                                                                                                                                         ggctgaggatttgggagtttattattgctggcaaggtacacattctccgctcacgttcgg
                                                                                                                                                                                                                                                                                                                                          tgacaggttcactggcagtggatcagggacagatttcacactgaaaatcaacagagtgga
                                                                                                                                                                                                                                                                                                                                                                                  GCCAGGCCAGTCTCCAAAGCTCCTGATCTACAAAGTTTCCAACCGATTTTCTGGGGTCCC
                                                                                                                                                                                                                                                                                                                                                                                               gccaggccagtctccaaagcgcctaatctatctggtgtctaaaactggactctggagtccc
                                                                                                                                                                                                                                                                                                                                                                                                                                       ATCTAGTCAGAGCCTTGTACACAGTAATGGAAACACCTATTTACATTGGTACCTGCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                     gtcaagtcagagcctcttggatagtgatggaaagacatatttgaattggttgttacagag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gacccaaactccactcactttgtcggttaccattggacaaccagcctccatctcttgcaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTCAGGTGGTGGTTCTGGCGGCGGCGGCTCCGGTGGTGGTGGTTCTGAGCTCGTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggatgttttgat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGATACTAACTACGACTGGTACTTCGATGTCTGGGGGCCAAGGGACCACGGTCACCGTÇTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAAGTTCAAGGGCAAGGCCACACTGACTGCAGACAAATCCTCCAGCACAGCGTCCATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctacctgca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACAGGTCCTTGAGTGGATTGGAGAGGTTTATCCTAGAATTGGTAATGCTTACTACAATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAAGGCTTCTGGCTACACCTTCACAAACTATGGTTTAAGCTGGGTGAAGCAGAGGCCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTGCTCGAGCAGTCTGGAGCTGAGCTGGCGAGGCCTTGGGGGCTTCAGTGAAGCTGTCCTG
                                                                                                                                                                                                                                                                                                                             AGACAGGTTCAGTGGCAGTGGATCAGGGACAGATTTCACACTCAAGATCAGCAGAGTGGA
unclassified.
1 (bases 1 to 810)
Chester K.A., Hawkins, R.E. and Begent, R. ANTIBODY AGAINST CARCINOEMBRYONIC ANTIGE Patent: WO 9515341-A 1 08-JUN-1995;
                                                                                                                         Sequence
A45006
                                                                                                             A45006.1
                                                                        unidentified
                                                                                   unidentified
                                                                                                                                                    A45006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          59.3%;
nilarity 75.3%;
Conservative
                                                                                                                                         μ
                                                                                                              GI:2299567
                                                                                                                                       from
                                                                                                                                                    810
                                                                                                                                       Patent
                                                                                                                                                    đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score
Pred.
                                                                                                                                         WO9515341.
                                                                                                                                                                                                                                             729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          432.2;
No. 2.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; DB 11;
.9e-123;
                   ANTIGEN
                  (CEA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                  07-MAR-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                      548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         89
                                                                                                                                                                                                                                                                                                                                                                                                           584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    245
                                                                                                                                                                                                                                                                                                                              399
                                                                                                                                                                                                                                                                                                                                                        644
                                                                                                                                                                                                                                                                                                                                                                                   809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1;
                                                                              Qy "
                                                      В
                                                                                                                                                                                                                                            ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
ORIGIN
                                                                                                              밁
                                                                                                                                                                뮻
                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDS
                                                                                   589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                             649
     721
                                                       661
                                                                                                              60I
                                                                                                                                      529
                                                                                                                                                                559
                                                                                                                                                                                           469
                                                                                                                                                                                                                     499
                                                                                                                                                                                                                                                409
                                                                                                                                                                                                                                                                         439
                                                                                                                                                                                                                                                                                                  349
                                                                                                                                                                                                                                                                                                                              379
                                                                                                                                                                                                                                                                                                                                                        292
                                                                                                                                                                                                                                                                                                                                                                                  319
                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                      259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    79
                                                     tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAAGATGCTGCCACTTATTACTGCCAGCAAAGGAGTAGTTACCCACTCACGTTCGGTGCT
                  ggccagtctccaaagcgcctaatctatctggtgtctaaactggactctggagtccctgac
                                                                                                                                                                              agtcagagcctcttggatagtgatggaaagacatatttgaatttggttgttacagaggcca
                                                                                                                                                                                                                    CAGTCTCCAGGAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATAACCTGCAGTGCC
                                                                                                                                                                                                                                     caaactccactcactttgtcggttaccattggacaaccagcctccatctcttgcaagtca
                                                                                                                                                                                                                                                                                    ggtggaggcggttcaggcggaggtggctctggcggtggccggatcggatgttttgatgacc
                                                                                                                                                                                                                                                                                                                                                                                               ctgcagctcagcatgcatctgaggacactgccgtctattattgtaat------
                                                                                                                                                                                                                                                                                                                                                                                                                                                    gccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctac
                                                                                                             GGCACTTCTCCCAAACTCTGGATTTATAGCACATCCAACCTGGCTTCTGGAGTCCCTGCT
                                                                                                                                                                                                                                                                         GGTGGAGGCG;TTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCAGAAAATGTGCTCACC
                                                                                                                                                                                                                                                                                                                             CCGACTGGGCCGTACTTGACTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTCA
                                                                                                                                                                                                                                                                                                                                          ---ttttacggggatgctttggactattggggccaagggaccacggtcaccgtctcctca
                                                                                                                                                                                                                                                                                                                                                                                  CTGCAGCTCAGCAGCCTGACATCTGAGGACACTGCCGTCTATTATTGTAATGAGGGGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCCCGAAGTTCCAGGGCCAAGGCCACTTTTACTACAGACACATCCTCCAACACAGCCTAC
                                                                                                                                                                AGCTCAAGTGTA-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CANCER RES CAMPAIGN TECH (GB)
Other publication CA 2177584
Other publication AU 1194795
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    œ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  //translation="ETVIMKYLLPTAAAGLLLLAAQPAMAQVKLQQSGAELVRSGTSV
kLSCTjasgenikusymmulaqapeoglemigwidpengdtexapkeqgckaffftdiss
.NTAYLQLSSLTSEDTAVYLCNEGTPTIGFYFDYTVVSSGGGSGGGGSGGGGSGGGS
.NTAYLQLSSLTSEDTAVYLCNEGTPTIGFYFDYMGDTTVVSSGGGSGGGSGGGSGGGSGGGS
SENVITQSPALMSASPGEKVTITCSASSSVSYMHWFDQKPGTSFKLMIYSTSNLASGV
PARFSGSGSGTSYSLTISRMEAEDAATYYCQQRSSYPLTFGAGTKLELKRAA"
p 220 c 222 g 179 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          conflict with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /protein_id="CAA02813.1"
/db_xref="GI:2299568"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="unidentified"
/db_xref="taxon:32644"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="unnamed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /codon_start=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   59.3%;
76.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; Score 432.2;
; Pred. No. 2.9e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          the conce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          conceptual translation"
                                                                                                                                                                -AGTTACATGCACTGGTTCCAGCAGAAGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      950608
950619.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; DB 81;
.9e-123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         is
     780
                                                       720
                                                                                 648
                                                                                                                                                                                                                                             468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60
                                                                                                             660
                                                                                                                                      588
                                                                                                                                                                600
                                                                                                                                                                                           528
                                                                                                                                                                                                                     558
                                                                                                                                                                                                                                                                         498
                                                                                                                                                                                                                                                                                                  408
                                                                                                                                                                                                                                                                                                                             438
                                                                                                                                                                                                                                                                                                                                                      348
                                                                                                                                                                                                                                                                                                                                                                                  378
                                                                                                                                                                                                                                                                                                                                                                                                                                    318
                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           258
                                                                                                                                                                                                                                                                                                                                                                                                           291
```

δÃ

밁 Qy В

B δÃ 뭥 δÃ 멍 Qy В В δ В δÃ Ъ Qy В

QΥ

δÃ В QY. δÃ В ρy

В

δÃ

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
TITLE
                                                                      Š
                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
SOURCE
ORGANISM
               Qy
                                             밁
                                                                                                                                Š
                                                                                                                                                              В
                                                                                                                                                                                        Q
                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                               ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 15
AX006750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity 75.: Matches 561; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                            1305
                                                                                                      1245
                                                                                                                                                                1185
                                                                                                                                                                                                                          1125
                                                                                                                                                                                                                                                                                                                                            1005
                                                                                                                                                                                                                                                                                  1065
                525
                                                                         465
                                                                                                                                 405
                                                                                                                                                                                           345
                                                                                                                                                                                                                                                     288
                                                                                                                                                                                                                                                                                                               246
                                                                                                                                                                                                                                                                                                                                                                        186
                                                                                                                                                                                                                                                                                                                                                                                                     945
                                                                                                                                                                                                                                                                                                                                                                                                                                126
                                                                                                                                                                                                                                                                                                                                                                                                                                                             885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        709 ggcaccaagctggaaatcaaa 729
|||||||||||||||
| 781 GGCACCAAGCTGGAGCTGAAA 801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 σ
gtcaagtcagagcctcttggatagtgatggaaagacatatttgaattggttgttacagag 524
                                                                                                                  gacccaaactccactctttgtcggttaccattggacaaccagcctccatctctttgcaa 464
                                                                                                                                                                                                                                        ---taatttttacggggatgctttggactattggggccaagggaccacggtcaccgtctc 344
                                                                                                                                                                                                                                                                                                   acagggcctggagtggattggatggattgatcctgagaattggtgatactgaatatgccgc 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagaggcctga 125
                                            ATCTAGTCAGAGCCTTGTACACAGTAATGGAAACACCTATTTACATTGGTACCTGCAGAA 1364
                                                                                                                                                                               CGATACTAACTACGACTGGTACTTCGATGTCTGGGGCCAAGGGACCACGGTCACCGTCTC
                                                                                                                                                                                                                                                                                                                                           GAAGTTCAAGGGCAAGGCCACACTGACTGCAGACAAATCCTCCAGCACAGCGTCCATGGA 1064
                                                                                                                                                                                                                                                                                                                                                                                                   ACAGGTCCTTGAGTGGATTGGAGAGGTTTATCCTAGAATTGGTAATGCTTACTACAATGA 1004
                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAAGGCTTCTGGCTACACCTTCACAAACTATGGTTTAAGCTGGGTGAAGCAGAGGCCTGG 944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gcagctgcagcagtctggggcagagcttgtgaggtcaggggcctcagtcaagttgtcctg 65
                                                                                                      GACCCAGACTCCACTCTCCCTGCCTGTCAGTCTTGGAGATCAAGCCTCCATCTTTGCAG
                                                                                                                                                                GCTCCGCAGCCTGACCTCTGAGGACTCTGCGGTCTATTTCTGTGCAAGACGGGGATCCTA 1124
                                                                                                                                                                                                                                                                                                                                                          gaagttocagggcaaggccactatgactgcagacacatcctccaataccagcctacctgca 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCTGCTCGAGCAGTCTGGAGCTGAGCTGGCGAGGCCTGGGGGCTTCAGTGAAGCTGTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
AX006750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Immunological reagent specifically interacting with extracellular domain of the human zeta chain Patent: WO 0003016-A 20-JAN-2000; CONNEX GMBH (DE); REITER CHRISTIAN (DE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            synthetic construct artificial sequence.
1 (bases 1 to 1637)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          synthetic construct.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Reiter,C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AX006750.1 GI:9994793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AX006750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1637 bp
17 from Patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="synthetic construct"
/db_xref="taxon:32630"
/note="artificial sequence"
404 c 436 g 399 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          59.3%;
75.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 432.2; DB 12;
Pred. No. 3e-123;
0; Mismatches 163;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA
WO0003016.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SYN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 1637;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                        1184
                                                                                                    1304
                                                                                                                                                              1244
                584
                                                                                                                                                                                                                                                                                                               287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ۲.
```

```
Ş
                                                           밁
                                                                                            Š
                                                                                                                            밁
                                                                                                                                                         Ş
                                                                                                                                                                                             В
1545
                                                             1485
                                                                                                                                                                                             1365 GCCAGGCCAGTCTCCAAAGCTCCTGATCTACAAAGTTTCCCAACCGATTTTCTGGGGTCCC
                                                                                                                            1425 AGACAGGTTCAGTGGCAGTGGATCAGGGACAGATTTCACACTCAAGATCAGCAGAGTGGA
                                                                                                                                                            585
                            705
                                                                                                                                             tgacaggttcnctggcagtggatcagggacagatttcacactgaaaatcaacagagtgga
             tgctggcaccaagctggaaatcaaa 729
                                                             GGCTGAGGATCTGGGAGTTTATTTCTGCTCTCAAAGTACACATGTTCCGTACACGTTCGG
                                                                            ggctgaggatttgggagtttattattgctggcaaggtacacattctccgctcacgttcgg
                                                                                                                            1484
                                                                                                                                                            644
                                                             1544
                                                                                                                                                                                             1424
                                                                                            704
```

Search completed: February Job time: 35030 sec 17, 2001, 22:57:49

```
Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-297-181-1
729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             February 17, 2001, 22:08:36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7991742 seqs, 3503743858 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           caggtgcagctgcagtc.....gcaccaagctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gb_est1:*
gb_est2:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gb_est6:*
gb_est7:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gb_est9:1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gb_est8:
                                         gb_est36:
gb_est37:
gb_est38:
gb_est39:
gb_est40:
                                                                                                                                                                                                                         gb_est27:
gb_est28:
em_estfun:*
em_esthum1:*
                                                                                                                                                            gb_est31:
jb_est32:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            b_est3:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      b_est12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              _est5:
                                                                                                                                                                                                                                                                                                                                                                                             b_est17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Search time 936.51 Seconds (without alignments) 5454.783 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15983484
```

em\_estpl

em\_esthum16:
em\_esthum17:
em\_esthum17:
em\_esthum19:
em\_esthum19:
em\_esthum20:
em\_estin1: \*
em\_estin3: \*
em\_estin3: \*
em\_estin4: \*
em\_estov2: \*

em\_estpi

em\_esthum11:\*
em\_esthum12:\*

em\_esthum7:\*
em\_esthum8:\*
em\_esthum9:\*
em\_esthum10:\*

em\_estpl5 em\_estro1

em\_estro

em\_estro9

em\_estro5

```
em_estp16:*
em_estp17:*
em_estp18:*
em_estr014:*
em_estr015:*
em_estr017:*
em_estr018:*
        em_gss14:*
em_gss15:*
em_gss16:*
em_gss17:*
                                              em_gss7:*
em_gss8:*
em_gss9:*
em_gss10:*
em_gss11:*
em_gss12:*
                                                                                                                 gb_gss24:*
em_gss5:*
em_gss6:*
                                                                                                                                                                                                                                                                                                                                  em_gss3:*
em_gss4:*
                                                                                                                                              gb_gss21:*
gb_gss22:*
gb_gss23:*
                                                                                                                                                                          9b_9ss14:*
9b_9ss15:**
9b_9ss16:**
9b_9ss16:**
9b_9ss17:**
9b_9ss18:**
9b_9ss19:**
                                                                                                                                                                                                                                                       9b_gss6: *
9b_gss7: *
9b_gss8: *
9b_gss9: *
9b_gss10: *
9b_gss11: *
9b_gss11: *
                                                                                                                                                                                                                                                                                                                                                                 gb_gss3:*
gb_gss4:*
em_gss1:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gb_est76:*
gb_est77:*
gb_est78:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gb_est65:*
gb_est66:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gb_est58:*
gb_est59:*
                                                                                                                                                                                                                                                                                                                                                                                               gb_gss1:*
gb_gss2:*
em_gss18:*
                                                                                                                                                                                                                                             gb_gss13:*
                                                                                                                                                                                                                                                                                                                                                       em_gss2:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gb_est75:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gb_est63:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  em_estro19:*
                                                             .
```

```
190: gb_gss25:*
191: gb_gss26:*
192: gb_gss27:*
193: gb_gss28:*
193: gb_gss28:*
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

,	0	0	Resul No
54ωωαc	る3.4.5.6.7.8.9.2.1.2.1.2.1.2.1.2.1.2.2.2.2.2.2.2.2.2	1004D0C	!
œ	1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	79.	Score
<b>ப்பு ப்பு வ</b>	00000000000000000000000000000000000000	00000111108	Query Match
υωτυσω	456 456 456 456 456 456 456 456	004204511795	Length
	••• - 1129	0 001	DB
AX50139/8 AW658126 BE144269 AW655441 AA496610 BE136816	7820808080808080808080808080808080808080	BE306420 BE307894 AW405772 AW405187 AW406187 AW406448 AW406448 AW4064313 AX734035 AX405725 BE829853	ID
AA23037/6 IM03480122 AW6588126 93905 MAR BE144269 MR0-HT015 AW655441 106209 MA AA496610 zv38g06.r BE136816 ug56b01.y	4683 UI-HF-BLO 4685 6109247 86958 60109247 86958 60109247 8811 48505.7 881 148505.7 881 148505.7 881 60109942 8758 86109942.7 8758 101-HF-BLO 4795 UI-HF-BLO 4786 UI-HF-BLO 4786 UI-HF-BLO 610967 8170 6010967 8170 60109816 8156 MR4-UM011 6366 MR4-UM011 6366 MR4-UM011 6361 MR4-UM011 6361 MR4-UM011 6364 MR4-UM011 6366 MR4-UM011 6366 MR4-UM011 6366 MR4-UM011 6366 MR4-UM011 6366 MR4-UM011 6366 MR4-UM011	306420 6011033 307894 6010965 307782 UI-HF-BL 05177 UI-HF-BL 06483 UI-HF-BL 06448 UI-HF-BL 4313 zx78c12.r 34035 zu56d02. 34035 zu56d02. 34035 zu56d02. 34035 zu56d02.	Description

## ALIGNMENTS

```
RESULT 1
BE306420 , BE306420 , 1057 bp mRNA EST 13-JUL-2000
LOCUS , BE306420 , 1057 bp mRNA EST 13-JUL-2000
DEFINITION '601103347F1 NCI_CGAP_Lu29 Mus musculus cDNA clone IMAGE:3495755 5',

MRNA sequence.
ACCESSION BE306420
VERSION BE306420 1 GI:9159604
KEYWORDS EST.
SOURCE house mouse.
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                       δõ
                                                                                                                                                                    δÃ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
                                                                             BE307894
                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                 ACCESSION
                                                DEFINITION
                                                                                            RESULT
 VERSION
                                                                FOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                          378
                                                                                                                                                                       293
                                                                                                                                                                                                                                      242
                                                                                                                                                                                                                                                                     258
                                                                                                                                                                                                                                                                                                 182
                                                                                                                                                                                                                                                                                                                                198
                                                                                                                                                                                                                                                                                                                                                              122
                                                                                                                                                                                                                                                                                                                                                                                            138
                                                                                                                                                                                                                                                                                                                                                                                                                         62
                                                                                                                                                                                                                                                                                                                                                                                                                                                        78
                                                                                                                                                        tttacggggatgcttttggactattggggccaagggaccacggtcaccgtctcctcag 349
                                                                                                                                                                                                                                                                                  ccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctacc 241
                                                                                                                                                                                                                                                                                                                                              ctgaacagggcctggagtggattggatggattgatcctgagaatggtgatactgaatatg.181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tgcagctcagcagcctggcatctgaggacactgccgtctattattgt------aatt 292
                                                                                                                                                                                                                                                                                                                                CTGAACAGGGCCTGGAGTGGATTGGATGGATTGATCCTGAGGATGGTGAAACTAAATATG
                                                                                                                                                                                                                                                                                                                                                                                            CCTGCACAGCTTCTGGCTTCAACATTAAAGACAGCCTTATGCACTGGGTGAAGCAGAGGC 197
                                                                                                                                                                                                                                                                                                                                                                                                            AGGTTCAGCTGCAGCCAGTCTGGGGCAGAGCTTGTGAGGCCCAGGGGGCCTCAGTCAAGTTGT 137
                                                                                                                                          TGTATGGTGGTTACTACGACTACTGGGGCCCAAGGCACCACTATCACAGTCTCCTCAG
                                                                                                                                                                                                    TGCAGCTCAGCAGCCTGACATCTGAGGACACTGCCATCTATTACTGTGCTAGAAACCTTT
                                                                                                                                                                                                                                                                  CCCCGAAGTTCCAGGACAAGGCCACTATAACTGCAGACACCTCCCCAACACAGCCTACC 317
mRNA sequence.
BE307894
BE307894.1 GI:9163704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  http://image.llnl.gov
Plate: LLAM8546 row: n column:
High quality sequence stop: 695.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus
                                          BE307894 793 bp mRNA
601096548F1 NCI_CGAP_Mam5 Mu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tissue Procurement: Gilbert Smith, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Robert Strausberg, Ph.D. Tel: (301) 496-1550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; |
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: Robert_Strausberg@nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NIH-MGC http://www.ncbi.nlm.nih.gov/MGC/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 1057)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="Organ: lung; Vector: pCMV-SPORT6; Site_1: SalI; Site_2: NotI; Cloned unidirectionally. Primer: Oligo: Library constructed by Life Technologies. Investigator providing samples: Gilbert Smith, NIH"

289 c 273 g 221 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Stem cell origin."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Mus musculus"
/strain="c2ECH II (feral)"
/db_xref="taxon:10090"
/clone="IMAGE:3495755"
/clone_lib="NCI_CGAP_Lu29"
/tissue_type="spontaneous tumor, metastatic to mammary.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   38.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 279.4;
Pred. No. 2.3e
0; Mismatches
                                                Mus
                                               musculus cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .3e-73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 106; Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                             IMAGE: 3491195
                                                               13-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1057;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Euteleostomí;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                       377
                                                                                                                                                                                                                                                                                                                              257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ďΤ.
                                               5,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ۳
                             RESULT -
AW405772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE CO
                                                                                              밁
                                                                                                                        γg
                                                                                                                                                        밁
                                                                                                                                                                                    Qy
                                                                                                                                                                                                                    Вb
                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                              Qγ
                                                                                                                                                                                                                                                                                                                                             DЪ
                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                         맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
 DEFINITION.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                     ŧ
                                                                                              382
                                                                                                                                                                                                                                                                                                                                                                                                                               394
                                                                                                                                                        322
                                                                                                                                                                                                                    262
                                                                                                                                                                                                                                                                                                                                             142
                                                                                                                                                                                                                                                                                                                                                                                                          82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        273;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   156
```

```
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match ;
Best Local Similarity
                                                                                                                                                                                                                                                                          634 aacagagtggaggctgaggatttgggagtttattattgctggcaaggtacacattctccg
                                                                                                                                                                                                                                                                                                                                                                       574 tctggagtccctgacaggttcactggcagtggatcaggggacaggittcacactgaaaatc 633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        514 ttgttaćagaggccaggccagtctccaaagcgcctaatctatctggtgtctaaactggac 573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     454 atctcttgcaagtcaagtcagagcctcttggatagtgatggaaagacatatttgaattgg 513
                                                                                                                                                                                                                                                                                                                                                                                                                                              202 TTCCTGCAGAAGCCAGGCCAGTCTCCAAAGCTCCTGATCAACAGAGTTTCCAACCGATTT 261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mammalia: Eutheria: Rodentia: Sciurognath::
1 (bases 1 to 793)
NIH-MGC http://www.ncbi.nlm.nih.gov/MGC/.
National Institutes of Health, Mammalian Ge
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Tel: (301) 496-1550
Email: Robert_Strausberg@nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTCACGTTCGGTGCTGGGACCAAGCTGGAGCTGAAA
                                                                                                                                                                                                                                                ACCAGAGTGGAGGCTGAGGATCTGGGGAGTTTATTTCTGCTCTCAAAGTACACATGTTCCG
                                                                                                                                                                                                                                                                                                                                              TCTGGGGTCCCAGACAGGTTCAGTGGCAGTGGATCAGGGACAGATTTCACACTCAAGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATCTCTTGTAGATCTAGTCAGAGCCTTTTACACAGTAATGGAAACACCTATTTACATTGG
AW405772 471 bp mRNA EST 16-FEB-2000 UI-HF-BLJ-abp-c-06-0-UI.rl NIH_MGC_37 Homo sapiens cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM8534 row: p column: 12
High quality sequence stop: 514.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tissue Procurement: Lothar Hennighausen Ph.D., cDNA Library Preparation: Life Technologies, 1 cDNA Library Arrayed by: The I.M.A.G.E. Consor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus
Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ω.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          '/note="Organ: mammary; Vector: pCMV-SPORT6; Site_1: Sal'
'Site_2: NotI; Cloned unidirectionally. Primer: Oligo d'
Library constructed by Life Technologies. Investigators
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   providing samples: Lothar Hennighausen/Robin Humphreys,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone_lib="NCI_CGAP_Mam5"
/tissue_type="tumor, gross tissue"
/dev_stage="7 months"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Mus musculus"
/strain="C57/B6"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone="IMAGE:3491195"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         32.3%;
81.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        210 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 235.2; DB 100
Pred. No. 4.7e-60;
0; Mismatches 63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   217 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                  417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 106; Length 793;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Robin Humphreys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                              693
                                                                                                                                                                                                                                                                                                                                              321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

```
밁
                                                                                                          οy
                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
KEYWORDS
SOURCE
밁
                                Š
                                                                                                                                                       B
                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 276; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
315
                                                                          255
                                                                                                                                                       195
                                                                                                                                                                                                                                                                        502
                                                                                                                                                                                                                                                                                                                                                   442
                                                                                                                                                                                                                                                                                                            75
                                                                                                                                                                                                                                                                                                                                                                                         15
                  acacattctccgctcacgttcggtgctggcaccaagctggaaatcaaa 729
                                                                                                                                                                           tctaaactggactctggagtccctgacaggttcactggcagtggatcagggacagatttc 621
                                                                                                                                                                                                                                                      ATACAGCTTCCTCACTTTCGGCGGAGGGACCAAGGTGGAGATCAAA
                                                                                          acactgaaaatcaacagagtggaggctgagggatttgggagtttattattgctggcaaggt 681
                                                                                                                                                                                                                                TATTTGTATTGGTACCTGCAGAAGCCAGGCCAGTCTCCACAGCTCCTGATCTATGAAGTT 194
                                                                                                                                                                                                                                                                                                            CAGTCGGCCTCCATCTCCTGCAAGTCTAGTCAGAGCCTCCTGCATAGTGATTTAAAGACC
                                                                                                                                                                                                                                                                                                                                                                                       GGATCCAGTGCAGATATTGTGATGACCCAGACTCCACTCTCTGTCCGTCACCCCTGGA 74
                                                                                                                                                     TCCAACCGGTTCTCTGGAGTGCCAGATAGGTTCAGTGGCAGCGGGTCAGGGACAGATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eco RI site shown at the beginning of the sequence.
Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
cDNA Library Preparation: M.B. Soares Lab
cDNA Library Arrayed by: M.B. Soares Lab
cDNA Sequencing by: M.B. Soares Lab
Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AW405772
AW405772.1 GI:6924829
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 471)
NIH-MGC http://www.ncbi.nlm.nih.gov/MGC/.
National institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     www-bio.llnl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IMAGE:3057394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -bio.llnl.gov/bbrp/image/image.html
primer: M13 Forward.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (301) 496-1550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /lab_host="DHIOB (LTI)"
/note="Vector: pT/T3-Pac; Site_1: NotI; Site_2: Eco RI;
/note="Vector: pT/T3-Pac; Site_1: NotI; Site_2: Eco RI;
/constructed from size fractionated cytoplasmic mRNA
(1.5-2.5kb). Directionally cloned. Cells provided by Lo.
M. Staudt, Ph.D. Library preparation by Maria de Fatima
Bonaldo, Ph.D. and M. Bento Soares, Ph.D."
124 c 119 g 121 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone_lib="NIH_MGC_37"
/tissue_type="lymph"
/cell_type="germinal center B cells"
/cell_type="record"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone="IMAGE:3057394"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /cell_line="MGC85"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    31.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           _Strausberg@nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Strausberg,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 232.8; DB 90;
Pred. No. 2.1e-59;
Pred. No. 2.2e-59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        90;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 471;
362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                      561
                                                                                                                                                                                                                                                                                                            134
                                                                                                                                                       254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           by Louis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,
```

```
δõ
                                                                                                                                                                                                                                                      밁
   밁
                                                       Q
                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                          딯.
                                                                                                                                                                                                                                                                                                                                                                                                                                        V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AW405187
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 276; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                *:175 TATTTGTATTGGTACCTGCAGAAGCCAGGCCAGTCTCCACAGCTCCTGATCTATGAAGTT
                                                                                                                                                                                                                                                                                                                  . 562
                                                                                                                             295
                                                                                                                                                                                                                                                                                                                                                                                                                                           502
355
                             682 acacattctccigctcacgttcggtgctggcaccaagctggaaatcaaa 729
                                                                                                                                                          622 acactgaaaatcaacagagtggaggctgaggattttggggagtttattattgctggcaaggt 681
                                                                                                                                                                                                                                                      235 TCCAACCGGTTCTCTGGAGTGCCAGATAGGTTCAGTGGCAGCGGGTCAGGGACAGATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             115 CAGCCGGCCTCCATCTCCTGCAAGTCTAGTCAGAGCCTCCTGCATAGTGATGGAAAGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #ctaaametggactctggagtccctgacaggttcactggcagtggatcagggacagatttc 621
                                                                                                                                                                                                                                                                                                                                                                                                                    caaccagcotccatctcttgcaagtcaagtcagagcctcttggatagtgatggaaagaca 501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATACAGCTTCCTCGCACGTTCGGCCAAGGGACCAAGGTGGAAATCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eco RI site shown at the beginning of the sequence. Tissue Procurement: Louis M. Staudt, M.D., Ph.D. cDNA Library Preparation: M.B. Soares Lab cDNA Library Arrayed by: M.B. Soares Lab DNA Sequencing by: M.B. Soares Lab Clone distribution: MGC clone distribution information found through the I.M.A.G.E. Consortium/LLNL at: www-bio.i.lnl.gov/bbrp/image/image.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NIH-MGC http://www.ncbi.nlm.nih.gov/MGC/.
National Institutes of Health, Mammalian
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia, Eutheria; Primates; Catarrhini; Hominidae; Homo.

1. (bases 1 to 614)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AW405187 614 bp mRNA ES'
UI-HF-BLO-acb-c-06-0-UI.rl NIH_MGC_37 Homo
IMAGE:3058546 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Robert Str.
Tel: (301) 496-1550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AW405187 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AW405187 :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Seq primer: M13 Forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Robert_Strausberg@nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   '/lab_host="DH10B (LTI)"

//note="Vector: pT/73-9c; Site_1: Not1; Site_2: Eco RI;

//note="Vector: pt/73-9c; Site_1: Pt/73-9c; Site_1: Pt/73-9c; Site_1: Pt/73-9c; Site_1: Pt/73-9c; Site_1: Pt/73-9c; Site_1: Pt/73-9c; Site_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:3058546"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /cell_type="germinal center B cells"
/cell_line="MGC85"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone_lib="NIH_MGC_37"
/tissue_type="lymph"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 232.8; DB 9
Pred. No. 2.3e-59;
0; Mismatches 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 90;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    72;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Collection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16-FEB-2000
cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                      294
                                                                                                                                                                                                                                                                                                                                                                                234
                                                                                                                                                                                                                                                                                                                                                                                                                                               561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     by Louis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   þe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

```
BASE COUNT
ORIGIN
                              ρy
                                                                        밁
                                                                                                           Ş
                                                                                                                                                   밁
                                                                                                                                                                                      Ş
                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT
AW406883
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                      621 cacactgaaaatcaacagagtggaggctgaggatttgggagtttattattgctggcaagg 680
                                                                      441 acaaccagootcoatotottgoaagtoaagtoagagootottggatagtgatggaaagac
                                                                                                                                                                                                                                                                                                                                381 cggtggcggatcggatgttttgatgacccaaaactccactttgtcggttaccatttgg 440
                                                                                                                                                                                                                                63
                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
nes 274; Conserv
                                                                                                                                                                                                                                                                                                           ω
                                                                                                                                                     CTATTTGGATTGGTACCTGCAGAAGCCAGGGCAGTCTCCACAGCTCCTGATCTATTTGGG
                                                                                                                                                                                                                                                                                                           CGAGGCCAGTGGGGATATTGTGATGACTCAGTCTCCACTCTCCCTGCCCCGTCACCCCTGG 62
                                                                                                                                                                                                                                AGAGCCGGCCTCCATCTCCTGCAGGTCTAGTCAGAGCCTCCTGCATAGTAATGGATACAA 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AW406883 454 bp mRNA EST 16-FEB-2000 UI-HF-BL0-adg-h-03-0-UI.rl NIH_MGC_37 Homo sapiens cDNA clone mAGE:3061493 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eco RI site shown at the beginning of the sequence Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AW406883.1 GI:6925940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDNA Library Preparation: M.B. Soares Lab
CDNA Library Arrayed by: M.B. Soares Lab
DNA Sequencing by: M.B. Soares Lab
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NIH-MGC http://www.ncbi.nlm.nih.gov/MGC/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mmalia; Eutheria; (bases 1 to 454)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        primer: M13 Forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          bio.llnl.
                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (301) 496-1550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Robert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Robert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Constructed from size fractionated cytoplasmic mRNA (1.5-2.5kb). Directionally cloned. Cells provided by Louis M. Staudt, Ph.D. Library preparation by Maria de Fatima Bonaldo, Ph.D. and M. Bento Soares, Ph.D."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone="IMAGE:3061493"
/clone_lib="NIH_MGC_37"
/tissue_type="lymph"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /lab_host="PH108 (LTI)"
/note="Yector: pT7T3-Pac; Site_1: NotI; Site_2: Eco RI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gov/bbrp/image/image.html
                                                                                                                                                                                                                                                                                                                                                                                                         31.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Strausbergenih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              _type="germinal center B cells"
_line="MGC85"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          O
                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                      Score 229; DB 90;
Pred. No. 2.9e-58;
0; Mismatches 75;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        114 g
                                                                                                                                                                                                                                                                                                                                                                                                                           Length 454;
                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                        560
                                                                                                                                                     182
                                                                                                                                                                                                                                                                                                                                                                                      0
```

```
Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT
AW406448
                                                                        Ωy
                                                                                                                                                       δÃ
                                                                                                                                                                                           밁
                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
δÃ
                                        밁
                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                  454 atctcttgcaagtcaagtcagagcctcttggatagtgatggaaagacatatttgaattgg 513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             681 tacacattctccgctcacgttcggtgctggcaccaagctggaaatcaaa 729
                                                    574 totggagtcc:tgacaggttcactggcagtggatcagggacagatttcacactgaaaatc
                                                                                                                 126 TTTCAGCAGAGGCCAATCTCCAATGAGCCTAATTTATAAGGTTTCTAACCGGGAC
                                                                                                                                       514 .ttgttacaga;gccaggccagtctccaaagcgcctaatctaggtgtctaaactggac
                                                                                                                                                                                                                                                                                              394 gatgttttgatgacccaaactccactcactttgtcggttaccattggacaaccagcctcc 453
634 aacagagtggaggctgaggatttgggagtttattattgctggcaaggtacacattctccg
                                          186
                                                                                                                                                                                             66 ATCTCCTGCAGGTCTAGTCAAAGCCTCGCACACAGTGATGGAAACACCTACTTGAATTGG
                                                                                                                                                                                                                                                                        6 GGTGTAGGGATGACTCAGTCTCCACTCTCCCTGCCCGTCACCCTTGGACAGCCGGCCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCTACAAACTCCTCAGACGTTCGGCCAAGGGACCAAGGTGGAAATCAAA
                                                                                                                                                                                                                                                                                                                                                   268;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; 1 (bases 1 to 444) NIH-MCC http://www.ncbi.nlm.nih.gov/MGC/.
National Institutes of Health, Mammalian Gene Collection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     UI-HF-BL0-acr-c:05-0-UI.rl NIH_MGC_37 Homo IMAGE:3060080 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eco RI site shown at the beginning of the sequence Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         www-bio.llnl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Robert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AW406448.1 GI:6925505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDNA Library Preparation: M.B. Soares Lab
CDNA Library Arrayed by: M.B. Soares Lab
DNA Sequencing by: M.B. Soares Lab
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      103
                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .: Robert_Strausberg@nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (301) 496-1550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Constructed from size fractionated cytoplasmic mRNA (1.5-2.5kb). Directionally cloned. Cells provided by Lo M. Staudt, Ph.D. Library preparation by Maria de Fatima
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bonaldo, Ph.D. and M. Bento Soares, Ph.D."
1 122 c 114 g 105 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xref="taxon:9606"
/clone="tMAGE:3060080"
/clone_lib="NHH_MGC_37"
/tissue_type="1ymph"
/cell_type="germinal center B cells"
/cell_line="MGC85"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /lab_host="DH10B (LTI)"
/note="Vector: pT7T3-Pac; Site_1: NotI; Site_2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .gov/bbrp/image/image.html
                                                                                                                                                                                                                                                                                                                                                                     31.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                     Score 227.2; DB Pred. No. 1e-57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA
                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                       рв 90;
                                                                                                                                                                                                                                                                                                                                                   68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sapiens cDNA clone
                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                       Length 444;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16-FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                            633
                                                                                                                                                                                                                                                                          65
                                                                                                                   185
                                                                                                                                                       573
                                                                                                                                                                                             125
                                        245
    200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Louis
                                                                                                                                                                                                                                                                                                                                                   0
```

```
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
AA464313
                                                             δÃ
 δã
                                 В
                                                                                              В
                                                                                                                            Š
                                                                                                                                                                                                                                           BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOCUS
                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                453
                                                                                                                               393
694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             246
                                  78
                                                                                                18
                                                 catctcttgcaagtcaagtcagagcctcttggatagtgatggaaagacatatttgaattg 512
                                                                                           GGATATTGTGATGACTCAGTCTCCACTCTCCCTGCCCGTCACCCCTGGAGAGCCGGCCTC 77
                                                                                                                  ggatgttttgatgacccaaactccactcactttgtcggttaccatttggacaaccagcctc
                                 CATCTCCTGCAGGTCTAGTCAGAGCCTCCTGCATAGTAATGGATACAACTATTTGGATTG 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ctcacgttcggtgctggcacccaagctggaaatcaaa 729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           266;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              zx78c12.r1 Soares ovary tumor NbHOT Homo sapiens cDNA IMAGE:809878 5' similar to gb:X72467 IG KAPPA CHAIN PI REGION (HUMAN);, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information. Seg primer: -28ml3 rev2 ET from Amersham.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Washington University School of Medicine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished (1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WashU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hillier, L., Allen, M. Kucaba, T., Lacy, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA464313.1 GI:2189197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA464313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AA464313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Schellenberg, K., Steptoe, M., Tan, F., Waterston, R. and Wilson, R. shu-Merck EST project 1997 published (1007)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (bases 1 to 363)
                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                          81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            314 286 1800
314 286 1810
                                                                                                                                                                                                                                                        M.Fatima Bonaldo. "
94 c 95 g
                                                                                                                                                                                                                                                                                                                    the Not I and Eco RI sites of a modified pT7T3 vector (Pharmacia). Library constructed by Bento Soares and M Fatima Ronaldo "
                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xref="taxon:9606"
/clone="IMAGE:809878"
/clone_lib="Soares ovary tumor NbHOT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Homo sapiens"
/db_xref="GDB:6039712"
                                                                                                                                                                                                                                                                                                                                                                                                                                                     /sex="Female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                  'tissue_type="ovarian tumor"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Allen, M.,
                                                                                                                                                                            30.6%;
78.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                363 bp
                                                                                                                                                             0
                                                                                                                                                          Score 223.4; DB 7; Pred. No. 1.3e-56; 0; Mismatches 71;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bowles, L., Dubuque, T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       non,G., Marra,M., Martin,J., Moore,B.
Tan,F., Theising,B., White,Y., Wylie
                                                                                                                                                                                         DB 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Louis, MO
                                                                                                                                                                                           Length
                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Geisel, G., Jost, S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10-JUN-1997
                                                                                                                                                           0
                                                                                                                                                           Gaps
                                                                                                                             452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             305
                                                                                                                                                           0;
```

QV

393

ggatgttttgatgacccaaactccactcactttgtcggttaccattggacaaccagcctc 452

Query Match Best Local S Matches 266

Similarity

30.6%;

Score 223.4; DB Pred. No. 1.4e-56 Mismatches

1.4e-56; 71;

Indels Length

0

Gaps

0

24;

Conservative

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT
AI734035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             138 GTACCTGCAGAGCCAGGGCAGTCTCCACAGCTCCTGATCTATTTGGGTTCTAATCGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                693 gctcacgttcygtgctggcaccaagctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  633 caacagagtggaggctgaggatttgggagtttattattgctggcaaggtacacattctcc 692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             573 ctctggagtccctgacaggttcactggcagtggatcaggggacagatttcacactgaaaaat 632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       318 ATTCACTTTCGGCCCTGGGACCAAAGTGGATATCAAA 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                198 CTCCGGGGTCCCTGACAGGTTCAGTGGCAGTGGATCAGGCACAGATTTTACACTGAAAAAT 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AI734035 ' 425 bp' mRNA EST 14-JUN-1999 zu56d02.y5 Soares ovary tumor NDHOT Homo sapiens cDNA clone IMAGE:741987.5' similar to gb:X72467 IG KAPPA CHAIN PRECURSOR V-II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: Robert_Strausberg@nih.gov
This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information. This read is a RESEQUENCE of a previously sequenced human clone Original clone citation: WashU-NCI human EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cancer Genome Anatomy Project (CGAP), Tumor Gene Index Unpublished (1997)
Other_ESTs: zu56d02.sl
Contact: Robert Strausberg, Ph.D.
Tel: (301) 496-1550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Maillinears, ----
1 (bases 1 to 425)

NCI/NIDR-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.

NCI/NIDR-CGAP institute / National Institute of Dental Research,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This read has been verified (found to hit its original self in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sap⊥ens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   numan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AI734035,1 GI:5055148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REGION (HUMAN);, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 primer: -40RP from Gibco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      orientation)
                                                     double-stranded cDNA was size selected, ligated to Eco RI adapters (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of a modified pT7T3 vector (Pharmacia). Library constructed by Bento Soares and M.Fatima Bonaldo. "
                       M.Fatima Bonaldo. "
M.114 c 111 g
                                                                                                                                                            /organism="Homo sapiens"
/db_xref="GDB:5942254"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                       /tissue_type="ovarian tumor"
/lab_host="DH10B (ampicillin
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                      /sex="Female"
                                                                                                                                                                                                                                                                                                                      /clone_lib="Soares ovary tumor NbHOT"
                                                                                                                                                                                                                                                                                                                                                  /clone-"IMAGE:741987"
                                                                                                                                                                                                                                                       resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                317
```

90

442;

0,

Gaps

0;

139 452

572

199

319 632 259

379 692

```
gctcacgttcggtgctggcaccaagctggaaatcaaa 729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ctctggagtccctgacaggttcactggcagtggatcagggacagatttcacactgaaaat 632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CATCTCCTGCAAGTCTAGTCAGAGCCTCCTGCTTAGTAATGGATATAATTATTTGGATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          catctcttgcaagtcaagtcagagcctcttggatagtgatggaaagacatatttgaattg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGATATTGTGATGACTCAGTCTCCACTCTCCCTGCCCGTCATCCCTGGAGAGCCGGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCACACTTTTGGCCAGGGGACCAAGCTGGAGATCAAA 416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       caacagagtggaggctgaggatttggggagtttattattgctggcaaggtacacattctcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTCCGGGGTCCCTGACAGGTTCAGTGGCAGTGGATCAGGCACAGATTTTACACTGAAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTATCTGCAGAAGCCAGGGCAGTCTCCACAGCTCCTGATCTATTTGGGTTCTAATCGGGC
                                                                                                                                                                                                                                                                                                            AA405415 442 bp mRNA EUS6602.r1 Soares ovary tumor NDHOT Homo IMAGE:741987 5' similar to gb:X72467 IG K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REGION (HUMAN);, mRNA sequence. AA405415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   White,Y., Wylie,T., Waterst WashU-NCI human EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hillier,L., Allen,M., Bowles,L., Krizman,D., Kucaba,T., Lacy,M., I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 442)
                                                                                                                                                                                                                                                                                                                                                                                                                                   Washington University School of 4444 Forest Park Parkway, Box
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished (1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AA405415.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                  314 286 1800
314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ier,L., Allen,M., Bowles,L., Dubuque,T., Geisel,G., Jost,S.,
nan,D., Kucaba,T., Lacy,M., Le,N., Lennon,G., Marra,M., Mart:
Moore,B., Schellenberg,K., Steptoe,M., Tan,F., Theising,B.,
e,Y., Wylie,T., Waterston,R. and Wilson,R.
            /db_xref="taxon:9606"
/clone="IMAGE:741987"
                                                                                                                                                                                      /sex="Female"
                                                                                                                                                                                                                                                  /organism="Homo sapiens"
/db_xref="GDB:5942254"
                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                    /clone_lib="Soares ovary
                                                                                                                                                                                                                                                                                                                                                                                                                                   of Medicine
x 8501, St. 1
                                                                                                                                                                                                     tumor NbHOT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    O9-NOV-1997
O sapiens cDNA clone
KAPPA CHAIN PRECURSOR
                                                                                                                                                                                                                                                                                                                                                                                                                                     Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            =
=
=
=
=
                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                     63108
                                                                                                                                                                                                                                                                                                                                                                   contact the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Martin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         V-II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 1
AW405725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                    FEATURES,
                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ctctggagtccctgacaggttcactggcagtggatcagggacagatttcacactgaaaat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        catctcttgcaagtcaagtcagagcctcttggatagtgatggaaagacatatttgaattg 512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ggatgttttgatgacccaaactccactcactttgtcggttaccattggacaaccagcctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGATATTGTGATGACTCAGTCTCCACTCTCCCTGCCCGTCATCCCTGGAGAGCCGGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCACACTTTTGGCCAGGGGACCAAGCTGGAGATCAAA 416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gctcacgttcggtgctggcaccaagctggaaatcaaa 729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      caacagagtggaggctgaggatttggggagtttattattgctggcaaggtacacattctcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CATCTCCTGCAAGTCTAGTCAGAGCCTCCTGCTTAGTAATGGATATAATTATTTGGATTG
                                                                        ÷.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        266;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AW405725.
AW405725.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    488 bp mRNA ES'
UI-HF-BLO-abv-f-05-0-UI.rl NIH_MGC_37 Homo
IMAGE:3057944 5', mRNA sequence
AW405725:
                                                                                                                                                                                                                                                Email: Robert_Strausberg@nih.gov
ECO RI site shown at the beginning of the se
Tissue Procurement: Louis M. Staudt, M.D.,
cDNA Library Preparation: M.B. Soares Lab
cDNA Library Arrayed by: M.B. Soares Lab
DNA Sequencing by: M.B. Soares Lab
Clone distribution: MGC clone distribution
                                                                                                                                                                                                                                                                                                                                                                Unpublished (1999)
Contact: Robert Stra
Tel: (301) 496-1550
                                                                                                                                                                                                                                                                                                                                                                                                                  NIH-MGC http://www.ncbi.nlm.nih.gov/MGC/.
National Institutes of Health, Mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; 1 (bases 1 to 488)
                                                                                                                                                                                                  Seq
                                                                                                                                                                                                                 www-bio.llnl
                                                                                                                                                                                                                                      tound
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                  primer: M13 Forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            90
                                                                                                                                                                                                                                  through the I.M.A.G.E. Consortium/LLNL
/lab_host="DH10B (LTI)"
/note="Vector: pT7T3-Pac; Site_1: NotI; Site_2: Eco
/note="Vector size fractionated cytoplasmic mRNA
                                                                               /clone="IMAGE:3057944"
/clone_lib="NIH_MGC_37"
/tissue_type="lymph"
                                                                                                                                                                                 Location/Qualifiers
                                                   /cell_type="germinal center
/cell_line="MGC85"
                                                                                                                                  /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                .gov/bbrp/image/image.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30.6%;
                                                                                                                                                                                                                                                                                                                                                                               Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 223.4; DB 7; Pred. No. 1.4e-56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ۵
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          118
                                                                      W
                                                                    cells"
                                                                                                                                                                                                                                                                                                                                                                                                                    Gene Collection
                                                                                                                                                                                                                                                                                                                   sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sapiens
                                                                                                                                                                                                                                                    information
                                                                                                                                                                                                                                      at:
```

cDNA clone

Euteleostomi;

can

ACCESSION VERSION KEYWORDS

SOURCE

ORGANISM

REFERENCE

AUTHORS

COMMENT

TITLE JOURNAL

FEATURES

source

RESULT AA405415

ø

DEFINITION Snoor 멂 δÃ 밁

380

Q

δÃ В Ş B Ş 밁

573 200 513 140 453

В

by Louis

```
JOURNAL
MEDLINE
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 11
BE829853/c
                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cocus
                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gctcacgttcggtgctggcaccaagctggaaatcaaa 729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CATCTCCTGCAGGTCTAGTCAGAGCCTCCTGTATAGTAATGGATACAACTATTTGGATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GATCACCTTCGGCCAAGGGACACGACTGGAGATTAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               caacagagtggaggctgaggatttgggagtttattattgctggcaaggtacacattctcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTCCGGGGTCCCTGACAGGTTCAGTGGCAGTGGATCAGGCACAGATTTTACACTGAAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ctctggagtccctgacaggttcactggcagtggatcaggggacagatttcacactgaaaat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTACCTGCAGAAGCCAGGGCAGTCTCCACAGCTCCTGATCTATTTGGGTTCTAATCGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         catctcttgcaagtcaagtcagagcctcttggatagtgatggaaagacatatttgaattg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGATATTGTGATGACTCAGTCTCCACTCTCCCTGCCCGTCACCCCTGGAGAGCCGGCCTC 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ggatgttttgatgacccaaactccactcttgtcggttaccattggacaaccagcctc 452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  265;
                                This sequence was derived from the FAPESP/LICR Human Cancer Genome Project. This entry can be seen in the following URL (http://www.ludwig.org.br/scripts/gethtml2.pl?tl=&t2=RC6-ET0073-210 600-011-F01&t3=2000-06-21&t4=1)
Seq primer: puc 18 forward
                                                                                                                                                                                                                                                                                                                                         Dias Neto,E., Garcia Correa,R., Verjovski-Almeida,S., Briones,M.R., Nagai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F., Goldman,G.H., Carvalho,A.F., Matsukuma,A., Baia,G.S., Simpson,D.H., Brunstein,A., deOliveira,P.S., Bucher,P., Jongeneel,C.V., O'Hare,M.J., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and
                                                                                                                                                                                                                                                                                                           Simpson, A.J.
Shotgun sequencing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BE829853 468 bp mI
RC6-ET0073-210600-011-F01
BE829853
                                                                                                                    Fax: +55-11-2707001
Email: asimpson@ludwig.org.br
                                                                                                                                                                                          Rua
                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 468)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BE829853.1
EST.
                                                                                                                                                                                                        Laboratory of
Ludwig Institu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                          Contact: Simpson A.J.G.
                                                                                                                                                                                                                                                                                             sequence tags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                          Prof. Antonio
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      105
quality sequence start: quality sequence stop: 3
                                                                                                                                                        +55-11-2704922
                                                                                                                                                                                                                                                                           Natl. Acad.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (1...
M. Stau
Bonaldo, F.
                                                                                                                                                                                     tory of Cancer Genetics
Institute for Cancer Research
of. Antonio Prudente 109, 4 andar,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .5-2.5kb). Directionally cloned. Cells provided by Lo. Staudt, Ph.D. Library preparation by Maria de Fatima naido, Ph.D. and M. Bento Soares, Ph.D."

129 c 129 g 125 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30.4%;
                                                                                                                                                                                                                                                                            SCi.
                                                                                                                                                                                                                                                                                                               of the human transcriptome with ORF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 221.8; DB yv;
Pred. No. 4.5e-56;
""" artches 72;
                                                                                                                                                                                                                                                                            U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mRNA EST 22-SEP-2000
D1 ET0073 Homo sapiens cDNA, mRNA sequence
                                                                                                                                                                                                                                                                            97
                                                                                                                                                                                                                                                                            (7),
                                                                                                                                                                                                                                                                            3491-3496
                                                                                                                                                                                        01509-010,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                            (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  488;
                                                                                                                                                                                        Sao Paulo-SP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                             expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

```
JOURNAL
COMMENT
                                                                                                                                                                                                    REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                            RESULT 1
AW404683
                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                 LOCUS
                                                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                             149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ggatgttttgatgacccaaactccactcactttgtcggttaccattggacaaccagcctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gctcacgttcggtgctggcaccaagctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGATATTOTGATGACTCAGTCTCCACTCTCNCTGCCGTCACCCCTGGAAGAGCCGGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTGGGCGTTCGGTCAAGGGACCAAGGTGGAAATCAAA 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGCAGAGTGGAGGCTGAGGATGTTGGGGGTTTATTACTGCAGGCAAACTCTACAAACTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTCCGGGGTCCCTGACAGGTTCAGTGGCAGTGGATCAGGCACAGATTTTACACTGAAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTACCTGCAGAAGCCAGGGCAGTCTCCACAGCTCCTGATCTATTTGGGTTCTAATCGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AW404683.1
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      263;
                                                                                                                          Eukaryote; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; I (bases 1 to 456)

NIH-MGC http://www.ncbi.nlm.nih.gov/MGC/.
National: Institutes of Health, Mammalian Gene Collection (1999)
Contact: Robert Strausberg, Ph.D.
Tel: (301) 496-1550
Email: Robert_Strausberg@nih.gov
Eco RJ site shown at the beginning of the sequence. Tissue Procurement: Louis M. Staudt, M.D., Ph.D. cDNA Library Preparation: M.B. Soares Lab cDNA Library Arrayed by: M.B. Soares Lab DNA Sequencing by: M.B. Soares Lab Clone distribution: MGC clone distribution information found through the I.M.A.G.E. Consortium/LLNL at: www-bio.llnl.gov/bbrp/image/image.html
                                                                                                                                                                                                                                                                                                                                            AW404683 456 bp mRNA ES: UI-HF-BLU-acd-a-01-0-UI.rl NIH_MGC_37 Homo IMAGE: 3058464 5', mRNA sequence.
                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                       human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Onote="Organ: lung_tumor; Vector: puc18; Site_1: Smal; Site_2: Smal; A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196,716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under low stringency conditions."

a 121 c 118 g 107 t 1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /dev_stage="Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone_lib="ET0073"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xref="taxon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                    GI:6923740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 219.2; DB 13:
Pred. No. 2.7e-55;
0; Mismatches 74;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   136;
                                                                                                                                                                                                                                                                                                                                                                   sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                           Collection
                                                                                                                                                                                                                                                                                                                                                                                 16-FEB-2000
                                                                                                                                                                                                                                                                                                                                                                   cDNA clone
                                                                                                                                                                                                                                                        Euteleostomi;
                                                                                                                                                                                                                                        Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                     can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              270
                                   þe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                              SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                     ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
H25625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE
                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
Matches 268; Conserv
                                                                        JOURNAL
                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  66
                                                                                                                                                                                                                                                                                                                                                                                                                                       13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ggtacacattctccgctcacgttcggtgctggcaccaagctggaaatcaaa 729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ttcacactgaaaatcaacagagtggaggctgaggatttgggagtttattattgctggcaa 678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gtgtctaaactggactctggagtccctgacaggttcactggcagtggatcagggtcagat 618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             acatatitgaattggttgttacagaggocaggccagtctccaaagcgcctaatctatctg 558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ggacaaccagcctccatctcttgcaagtcaagtcagagcctcttggatagtgatggaaag 498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGTGGATCCAGTGGGGATATTGTGATGACTCAGTCTCCACTCTCCCTGCCCGTCACCCCT 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTTCTACAAACTTCGATCACCTTCGGCCAAGGGACACGACTGGAGATTAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGTTCTAATCGGGCCTCCGGGGGTCCCTGACAGGTTCAGTGGCAGTGCGTCAGGCACAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AACTATTTGGATTGGTACCTGCAGAAGCCAGGGCAGTCTCCACAGCTCCTGATCTATTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGAGAGCCGGCCTCCATCTCCTGCAGGTCTAGTCAGAGCCTCCTCCATAGTGATGGATAC 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Seq
                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 488)

Hillier, L., Clark, N., Dubuque, T., Elliston, K., Hawkins, M., Holman, M., Kucaba, T., Le, M., Lennon, G., Marra, M., Parsons, J. Rifkin, L., Rohlfing, T., Soares, M., Tan, F., Trevaskis, E., Waterston, R., Williamson, A., Wohldmann, P. and Wilson, R.
                                                                                                                                                                                                                                                                                                                                     488 bp mRNA EST 10-JUL-1995
Y148905.r1 Soares breast 3NbHBst Homo saplens cDNA clone
IMAGE:161528 5' similar to gb:X72467 IG KAPPA CHAIN PRECURSOR V-II
REGION (HUMAN);, mRNA sequence.
                 Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. 1
                                                                                                                                                                                                                                                                                     EST
                                                       Contact: Wilson RK
                                                                        Unpublished (1995).
                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                       H25625.1
                                                                                                                                                                                                                                                                  human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            primer:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
314 286 1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /lab_host="DHIOB (ITI)"
/note="Yector: pT/T3-Pac; Site_1: Not1; Site_2: Eco RI;
/note="Yector: pT/T3-Pac; Site_1: Not1; Site_2: Eco RI;
/constructed from size fractionated cytoplasmic mRNA
(1.5-2.5kb). Directionally cloned. Cells provided by Lov
M. Staudt, Ph.D. Library preparation by Maria de Fatima
Bonaldo, Ph.D. and M. Bento Soares, Ph.D."

121 c 117 g 119 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone="IMAGE:3058464"
/clone_lib="NIH_MGC_37"
/tissue_type="lymph"
                                                                                                                                                                                                                                                                                                     GI:894748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /cell_type="germinal center B cells"
/cell_line="MGC85"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          M13 Forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . 456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 218.2; DB 9
Pred. No. 5.3e-55
0; Mismatches 8:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         90;
                 Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 456;
                   ŏ
                 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                Waterston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          by Louis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

```
BE286958
                                                                                                                                                                                                                   QY
                                                                                                                                                                    δÃ
                                                                                                                                                                                              밁
                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                   ğ
                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                  δõ
                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                 ğ
                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                              믕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
             SOURCE
                                             ACCESSION *
                                                                        DEFINITION
                                                                                   LOCUS
                                                                                                          RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
                      KEYWORDS
                                   VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                              362
                                                                                                                                                                                              302
                                                                                                                                                                                                                     633
                                                                                                                                                                                                                                            242
                                                                                                                                                                                                                                                                    573
                                                                                                                                                                                                                                                                                            182
                                                                                                                                                                                                                                                                                                                   513
                                                                                                                                                                                                                                                                                                                                           122
                                                                                                                                                                                                                                                                                                                                                                    453
                                                                                                                                                                                                                                                                                                                                                                                                                    393
                                                                                                                                                                                                                                                                                                                                                                                            62
                                                                                                                                                                                                                                                                                                                                                                                                        GCTCACTTTCGGCGGAGGGACCAAGGTNGAGATNCAA
                                                                                                                                                         gctcacgttcjgtgctggcaccaagctggaaatcaaa 729
                                                                                                                                                                                                          caacagagtgyaggctgaggatttgggagtttattattgctggcaaggtacacattctcc
                                                                                                                                                                                                                                                          ctctggagtccctgacaggttcactggcagtggatcaggggacagatttcacacactgaaaat
                                                                                                                                                                                                                                                                                                        CATCTCCTGCAAGTCTAGTCAGAGCCTCCTACATAGTAATGGATACAGTTATTTGGATTG
                                                                                                                                                                                                                                                                                                                                                        catctcttgchagtcaagtcagagcctcttggatagtgatggahagacatatttgaattg 512
                                                                                                                                                                                                                                                                                                                                                                                          GGATATTGTGATGACTCAGTCTCCACTCTCCCAGCCCGTCACCCCTGGAGAGCCGGCCTC 121
                                                                                                                                                                                             CTCCGGGGTCCCTGACAGGTTCAGTGGCAGTGGATCAGGCACAGATTTTACACTGAGAAT
                                                                                                                                                                                                                                                                                            GTACCTGCAGAAGCCAGGACAGTCTCCACAGCTCCTGATCTATTTGGCTTCTAAGCGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                            262;
                                                mRNA sequence
BE286958
                                                                   BE286958 911 bp mr
601092470F1 NCI_CGAP_Mam5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                High quality sequence stops: 362 Source: IMAGE Consortium, LINL This clone is available royalty-free through LINL; contact the IMAGE Consortium (info@image.llnl.gov) for further information. Insert Length: 1071 Std Error: 0.00
Mus muscalus
                                   BE286958.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: est@watson.wustl.edu
Insert Size: 1071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fax: 314 286 1810
            house mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       primer: M13RP1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  :99
                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           quality sequence stop:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 :Bonaldo."
a 130 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Homo sapiens"
/db_xref="GDB:575685"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xref="taxon:9606"
/clone="IMAGE:161528"
/clone_lib="Soares breast 3NbHBst"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /sex="Female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ocation/Qualifiers
                                   GI:9165654
                                                                                                                                                                                                                                                                                                                                                                                                                                                     29.98;
77.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 218.2; DB 141;
Pred. No. 5.5e-55;
0; Mismatches 75; I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 φ
                                                                        Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           362.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  127 t
                                                                                                                                              398
                                                                       cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                       IMAGE: 3487241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   488;
                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                    692
                                                                                                                                                                                                                                                                    632
                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                   452
                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
LOCUS
                                                                                                RESULT 1
AW406473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                            Q
                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                            ACCESSION
                                                                                                                                                                             밁
                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
           /ERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                             365
                                                                                                                                                                                                                                                    305
                                                                                                                                                                                                                                                                                                                             245
                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                      185
                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              125
                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 caggtgcagctgcagcagtctggggcagagcttgtgaggtcagggggcctcagtcaagttg 60
                                                                                                                                                                                                                                                    CATGCAGCTCAGCAGCCTGACATCTGAGGACTCTGCGGTCTATTACTGTACAAGAGAGGG
                                                                                                                                                                                                                                                                                                                                             tgccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagccta 239
                                                                                                                                                                                                                ggat----
                                                                                                                                                                                                                                                                     cctgcagctcagcagcctggcatctgaggacactgccgtctattattgtaatttttacgg 299
                                                                                                                                                                                                                                                                                                                             CAATGAGAAGTTCAAGAGCAAGGCCACACTGACTGTAGACAAACCCTCCAGCACAGCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                      gcctgaacagggcctggagtggattggatggattgatcctgagaatggtgatactgaata 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaa-gcagag 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGGTCCAACTGCAGCAGCCTGGGGGCTTGAGCTTGTGAAGCCTGGGGGCTTCAGTAAAGCTG 124
                                                                                                                                                                             GGATTACGACGCTATGGACTACTGGGGGTCAAGGAACCTCAGTCACCGTCTCCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                   GCCTGGACGAGGCCTTGAGTGGATTGGAAGGATTGATCCTAATAGTGGTGGTACTAAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCCTGCAAGGCTTCTGGCTACACCTTCACCAGTTACTGGATGCACTGGGTGAACGCAGAG
AW406473 353 bp mRNA
U1-HF-BLO-acr-e-08-0-UI.rl NIH_MGC_37
IMAGE:3560182 5', mRNA sequence.
AW406473
AW406473.1 GI:6925530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: Robert_Strausberg@nih.gov
Tissue Procurement: Lothar Hennighausen Ph.D., Robin Humphre
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyce Genomics, Inc.
Clone distribution: MGC clone distribution information can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Tel: (301) 496-1550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 (bases 1 to 911)
NIH-MGC http://www.ncbi.nlm.nih.gov/MGC/.
National Institutes of Health, Mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Plate: LLAM8524 row: k column: 18 High quality sequence stop: 688.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                              -gctttggactattggggccaagggaccacggtcaccgtctcctcag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        បា
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="Organ: mammary; Vector: pCMV-SPORT6; Site_1; Sal; Site_2: NotI; Cloned unidirectionally. Primer: Oligo di Library constructed by Life Technologies. Investigators providing samples: Lothar Hennighausen/Robin Humphreys,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone="IMAGE:3487241"
/clone_lib="NCI_CGAP_Mam5"
/tissue_type="tumor, gross tissue"
/dev_stage="7 months"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Mus musculus"
/strain="C57/B6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        262 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 214.8;
Pred. No. 7.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      261 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      197 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .2e-54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            67;
                                                                 Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                               sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Robin Humphreys
                                                                              16-FEB-2000
                                                               cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . 911;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7;
                                                                                                                                                                                                              349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                             304
                                                                                                                                                                                                                                                                                                                                                                                                   244
                                                                                                                                                                                                                                                    364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2
```

```
Dρ
                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                   멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
SOURCE
                                                                                        밁
                                                                                                                       δÃ
                                                                                                                                                            밁
                                                                                                                                                                                          Q.
                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                 당
                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
     2 .
                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                       393 ggatgttttgattgacccaaactccactttigtcggttaccattggacaaccagcctc 452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                              513
                     343
                                                       693
                                                                                        283
                                                                                                                          633
                                                                                                                                                            223
                                                                                                                                                                                                                              163
                                                                                                                                                                                                                                                                                                                                 453
                                                                                                                                                                                                                                                                                                 103 CATCTCCTGCAGGTCTAGTCAGAGCCTCCTGCATAGTAATGGATACAACTATTTGGATTG
                                                                                                                                                                                                                                                                                                                                                                   43
                 catctcttgcaagtcaagtcagagcctcttggatagtgatggaaagacatatttgaattg
                                                                                                                                                                          ctctggagtccctgacaggttcactggcagtggatcagggacagatttcacactgaaaat 632
                                                                                                                                                                                                                                                                                                                                                                   GGATATTGTGATGACTCAGTCTCCACTCTCCCTGTCCGTCACTCCTGGAGAGCCCGGCCTC 102
                                                                                        GTACCTGCAGAAGCCAGGGCAGTCTCCACAGCTCCTGATCTATTTGGTTTCTAATCGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                     250;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: Robert_Strausberg@nih.gov
Eco RI site shown at the beginning of the sequence.
Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
cDNA Library Preparation: M.B. Soares Lab
cDNA Library Arrayed by: M.B. Soares Lab
DNA Sequencing by: M.B. Soares Lab
Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at:
www-bio.lnl.gov/bbrp/image/image.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              www-bio.linl.gov/bbrp/image/image.html
Seq primer: M13 Forward.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished (1999)
Contact: Robert Stratel: (301) 496-1550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryotn; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia, Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 353)

NIH-MGC http://www.ncbi.nlm.nih.gov/MGC/.

National institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Constructed from size fractionated cytoplasmic mRNA (1.5-2.5kb). Directionally cloned. Cells provided by M. Staudt, Ph.D. Library preparation by Maria de Fai Bonaldo, Ph.D. and M. Bento Soares, Ph.D."

93 c 93 g 94 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:3060182"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /cell_type="germinal center
/cell_line="MGC85"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /lab_host="DH10B (LTI)"
/note="Vector: pT7T3-Pac; Site_1: NotI; Site_2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone_lib="NIH_MGC_37"
/tissue_type="lymph"
                                                                                                                                                                                                                                                                                                                                                                                                                                                   29.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 213.4; DB 90;
Pred. No. 1.4e-53;
                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B cells"
                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ided by Louis
de Fatima
                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eco RI;
                                                                                                                          692
                                                                                                                                                                                                                                                                                                                                 512
                                                                                                                                                                                                                                                                                                 162
                                                                                                                                                            282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     þe
                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

Search completed: February Job time: 13895 sec

18,

2001,

02:00:11

a

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Run
                                                                                                                                                                                                                                               Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Searched
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                91:
                                                                                                                                                                                                                                                                                                              Pred. No. is the number of results predicted by chance to I score greater than or equal to the score of the result being and is derived by analysis of the total score distribution
                                                                                                                                                                                                                         Score
   717.8
716.2
716.2
716.2
716.2
460.8
452.2
432.2
432.2
432.2
432.2
   Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N_Geneseq_36:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 480022 seqs, 187831343 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IDENTITY_NUC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-297-181-1
729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            February 17, 2001, 18:26:59; Search time 96.92 Seconds (without alignments)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       caggtgcagctgcagccccagctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /cgn2_2/gcgdata/geneseq/geneseqn/NA1981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /cgn2_2/gcgdata/geneseq/geneseqn/NA1980.DAT:
                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                   2/gcgdata/geneseq/geneseqn/NA2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        //gcgdata/geneseq/geneseqn/NA1991.DAT:*
//gcgdata/geneseq/geneseqn/NA1992.DAT:*
//gcgdata/geneseq/geneseqn/NA1993.DAT:*
//gcgdata/geneseq/geneseqn/NA1994.DAT:*
//gcgdata/geneseq/geneseqn/NA1995.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /gcgdata/geneseq/geneseqn/NA]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'gcgdata/geneseq/geneseqn/NA1988.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /gcgdata/geneseq/geneseqn/NA1989.DAT:*
/gcgdata/geneseq/geneseqn/NA1990.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                      /gcgdata/geneseq/geneseqn/NA1998.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                        /gcgdata/geneseq/geneseqn/NA1996.DAT:*
                                                                                                                                                                                                                             ₽B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cgdata/geneseq/geneseqn/NA1987.DAT:*
                                                                                                                                                                        V36236
                                                                                     X58936
V36237
V09256
                                                                                                                                         T86234
T86221
                                                      X58690
X77245
                                    Q90663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'geneseq/geneseqn/NA1984.
                                                                                                                                                                                                                                                                              SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2825.610 Million cell updates/sec
                                                                                                 Anti-human protein
Human p53 protein
Plasmid pJG718 enc
DNA öd SCFV D3M wh
Mouse scFV fragmen
MFE-23 antibody co
Bispecific anti-ze
Mouse scFV fragmen
                                                                                                                                                                                                                                                                                                                  e to have a
t being printed,
                                                                                                                                                                                                                         Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .DAT:
                                                                                                                                                      DNA of ScFv 421 wh
Coding sequence fo
Anti-human protein
                                                                   Nucleotide sequenc
Monoclonal antibod
                                                                                                            ٠.
```

## ALIGNMENTS

V36236;

V36236 standard; DNA; 729 BP

(RHON ) RHORE-POULENC RORER SA Single chain antibody; ScFv 421; mouse; p53 protein; oligomerisation; regulatory domain; p53 mutant; H273; W248; G281; p53-dependent trans-activating activity; restoration; Debussche L, 29-OCT-1996; 96FR-0013176. 27-OCT-1997; WPI; 1998-272149/24. P-PSDB; W60769. 07-MAY-1998 WO9818825-A1 Mus sp. DNA of ScFv 421 which binds to mutant p53 proteins 08-SEP-1998 (first entry) hyper-proliferation; cancer; re-stenosis; ss. tumour-suppressing activity; Bracco 97WO-FR01921 tumour cell; treatment;

Restoring p53-dependent trans-activating activity to cell containing mutant p53 - by delivering single-chain antibody specific for the

```
S
                         В
                                                γQ
                                                                                В
                                                                                                        Š
                                                                                                                                     В
                                                                                                                                                         Q
                                                                                                                                                                                           B
                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                          δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ΩY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present sequence encodes a single chain antibody (ScFv) designated 421. The antibody binds to an epitope present in the C-terminal region of the p53 protein that includes oligomerisation and regulatory domains, specifically between positions 320 and 393. ScFv 421 is directed against p53 mutants, particularly H273, W248 and G281 mutants. When the ScFv is introduced into cells containing a mutant p53 protein, p53-dependent trans-activating activity is restored. ScFv 421 is specific for p53-mutants that have lost tumour-suppressing activity and are present in tumour cells. It is particularly used to treat hyper-proliferation associated with these mutants (e.g. cancer and re-stenosis) but may also be used in vitro for studying mechanisms of activity of p53 or its mutant and to purify or detect p53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                           661
                                                      661
                                                                                                           601
                                                                                                                                      541
                                                                                                                                                                                             481
                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Sir
hes 729;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ш
gaaatcaaa
                                        gtttattattgctggcaaggtacacattctccgctcacgttcggtgctggcaccaagctg
                                                                                          agtggatcagggacagatttcacactgaaaatcaacagagtggaggctgaggatttggga
                                                                                                                                                  aagcgcctaatctatctggtgtctaaactggactctggagtccctgacaggttcactggc
                                                                                                                                                                                                        ttggatagtgatggaaagacatatttgaattggttgttacagagggccaggccagtctcca
                                                                                                                                                                                                                                                              actttgtcggttaccattggacaaccagcctccatctcttgcaagtcaagtcagagcctc
                                                                                                                                                                                                                                                                                                    gatgctttggactattggggccaagggaccacggtcaccgtctcctcaggttggaggcgt
                                                                                                                                                                                                                                                                                                                                                                                                                             ctgcagctcagcagcctggcatctgaggacactgccgtctattattgtaatttttacggg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      caggtgcagctgcagcagtctggggcagagcttgtgaggtcaggggcctcagtcaagttg
                         gtttattattgctggcaaggtacacattctccgctcacgttcggtgctggcaccaagctg
                                                                              agtggatcagggacagatttcacactgaaaatcaacagagtggaggctgaggatttggga
                                                                                                                                   aagcgcctaatctatctggtgtctaaactggactctggagtccctgacaggttcactggc
                                                                                                                                                                                                                                                actttgtcggttaccattggacaaccagcctccatctcttgcaagtcaagtcagagcctc
                                                                                                                                                                                                                                                                                                                                                          gatgctttggactattggggccaagggaccacggtcaccgtctcctcaggtggaggcggt
                                                                                                                                                                                                                                                                                                                                                                                                                ctgcagctcagcagcctggcatctgaggacactgccgtctattattgtaatttttacggg
                                                                                                                                                                                           ttggatagtgatggaaagacatatttgaattggttgttacagaggccaggccagtctcca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      caggtgcagctgcagcagtctggggcagagcttgtgaggtcaggggcctcagtcaagttg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  particularly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; ilarity 100.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                174 A; 171 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     for treatment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          French
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 729; DB 19;
Pred. No. 2.4e-200;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>ი</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tumours
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                    720
                                                                                660
                                                                                                                                                                                                                                                480
                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                                                                                                                       360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                           720
                                                                                                           660
                                                                                                                                                                                                                     540
                                                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
```

Qy B

28

tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg

caggtgcagctgcagcagtctggggcagagcttgtaaggtcaggggcctcagtcaagttg

```
RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                吊
                                                                                                                                     The invention relates to novel chimaeric, bispecific proteins which CC comprise: (a) a DNA binding domain and (b) a domain which binds a CC trans-activator (TA), trans-repressor (TR) or their complexes, which are CC characteristic of a physiological or physiopathological state. The novel CC chimaeric, bispecific proteins allow expression of a therapeutic protein CC (e.g. diphtheria or Pseudomonas toxins, thymidine kinase, single chain CC antibodies) to be regulated in response to particular conditions. CC The Ta- or TR-binding domain may be a antibody such as a single chain CC antibody. This sequence encodes such a single chain antibody targeted to the p53 protein. The sequence is constructed from the gene encoding CC the light and heavy chain variable regions of the antibody produced by hybridoma pAb421. The 340 and 325 by sequences encoding the heavy and CC light chain variable regions respectively are amplified by PCR and CC included to the specification), amino acids 9-241 represent the linked together by a linker "arm". In the protein produced (sequence CC not given in the specification), amino acids 9-241 represent the linked CC vh-linker-V1 sequence. The protein also contains an myc epitope tag CC represented by amino acids 256-266.
                                                      Query
Best I
                                        Best Local Sir
Matches 722;
                                                                                                               -Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                          Conditional gene expression system triggered by e.g. infection hyper-proliferation - comprises novel bi:specific proteins have DNA-binding domain and second domain specific for trans-activates.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         diphtheria; Pseudomonas; toxin; thymidine kinase; single pathogen; HIV Tat; papilloma virus; E6/E7; Epstein-Barr hyperproliferation; p53; tumour; oligomerisation; ss.
                                                                                                                                                                                                                                                                                                                                                                                                     Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (RHON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bracco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              03-OCT-1996.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO9630512-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chimaeric; bispecific; DNA binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Coding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           T48000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 1996-455359/45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-MAR-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               721 gaaatcaaa
                                                                    Match
caggtgcagctgcagcagtctggggcagagcttgtgaggtcaggggcctcagtcaagttg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           standard;
                                                        Similarity
                                                                                                               768
                                                                                                                                                                                                                                                                                                                                                                                                  Page 44-45; 81pp; French
                                                                                                                                                                                                                                                                                                                                                                                                                             for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Schweighoffer F,
                                        Conservative
                                                                                                               BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            POULENC RORER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               729
                                                                                                                                                                                                                                                                                                                                                                                                                             gene therapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        95FR-0003841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     96WO-FR00477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   for single-chain
                                                                                                               181
                                                                                                               A.
                                                        98
86
                                                      3.5%;
                                                                                                               185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₽P
                                                                                                             Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SA
                                         0;
                                                        Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tocque
                                        core 717.8; DB :
red. No. 4e-197;
Mismatches
                                                                                                               218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      antibody
                                                                                                               <u>ი</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            domain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                184
                                                                                                               Η.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            trans;
                                                                                                                0
                                         7;
                                                                                                                other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        p53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                activator; repressor;
single chain antibody
n-Barr virus; EBNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                               trans-activator
                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein
                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                          having
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 antibody;
EBNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           õ
                                         Gaps
              60
                                                                                                                                                                                                                                                                                                                                                                                                                                               Ö,
                                         0
```

```
Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QΥ
FRY TO NO.
                                                                                                                                                                                                                                                                                           유
                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                        Leucine sipper domain; LZD; oligomerisation domain; mutant; muta
substitution; replacement; transactivation; viral protein VP16;
anti-oncogene; hyperproliferation; cancer; restenosis; SCFV;
tumour suppression; apoptosis; single chain antibody variable do
                    17-JUL-1996;
                                                                                           Mammalia.
                                                                                                                                                                                                24-NOV-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                             508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                           748
                                                                                                                                                                                                                                                                                                             721
                                                                                                                                                                                                                                                                                                                                                                                                601
                                                                                                                                                                                                                                                                                                                                                                                                                    568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              agtggatcagggacagatttcacactgaaaatcaacagagtggaggctgaggatttggga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctac
                                                                                                                                                                                                                                                                                          gaaattaaa
                                                                                                                                                                                                                                                                                                      gaaatcaaa
||||| |||
                                                                                                                                                                                                                                                                                                                                 agtggatcagggacagatttcacacttaaaatcaacagagtggaggctgaggatttggga
                                                                                                                                                                                                                                                                                                                                                                                                                  aagcgcctaatctatctggtgtctaaactggactctggagtccctgacaggttcactggc
                                                                                                                                                                                                                                                                                                                                                                                                                            aagcgcctaatctatctggtgtctaaactggactctggagtccctgacaggttcactggc
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ttggatagtgatggaaaaacatatttgaattggttgttacagaggccaggccagtctcca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ttggatagtgatggaaagacatatttgaattggttgttacagagggccaggccagtctcca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    actttgtcggttaccattggacaaccagcctccatctcttgcaagtcaagtcagagcctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              actttgtcggttaccattggacaaccagcctccatctcttgcaagtcaagtcagagcctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tcaggcggaggtggctctggcggtggcggatcggatgttttgatgacccaaactccactc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tcaggcggaggtggctctggcggtggcggatcggatgttttgatgacccaaactccactc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg
                                                                                                                                                                                                                                        standard;
                    96WO-FR01111
                                                                                                                                                                                                                                        cDNA;
                                                                                                                                                                         p53 single chain antibody
                                                                                                                                                                           Scrv
                                                                                                                                                                             421 cDNA
                                                                                                                                                        mutein;
                                                                                                                          domain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                             567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                                                                                                                           687
                                                                                                                                                                                                                                                                                                                                                                                                660
                                                                                                                                                                                                                                                                                                                                                                                                                    627
                                                                                                                                                                                                                                                                                                                                                                                                                                        600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               327
```

Sequence

749

BP;

173 A; 179

Ç

221 G;

176 T; 0 other;

98.2**%**; 98.9**%**;

Length

```
CC Claimed variants of protein p53 have at least part of the CC coligomerisation domain deleted and replaced by a leucine zipper domain. The mutants preferably also have at least part of the p53 cransactivation domain (amino acids 1-74) deleted and replaced by the transactivating domain (TD) from herpes simplex virus viral crowder of the transactivating domain (TD) from herpes simplex virus viral crowder of the transactivating domain (TD) from herpes simplex virus viral crowder of the transactivation of the protein domain able to bind selectively to a transactivator, especially a single-chain cantibody variable domain (SCFV). The present sequence represents the NcoI-NotI fragment of cDNA coding for the anti-p53 single-chain coding for the anti-p53 single-chain coding scrv 421. The fragment contains an ATG initiation codon. The p53 variants are more active and more stable tumour suppressors and capoptosis-inducing agents than wild-type p53 and are active where the wild-type protein is not, i.e. they are not inactivated by commant negative or oncogenic mutants, nor by other cellular corrections (because the leucine zipper domain prevents formation of codinactive mixed oligomers).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (RHON ) RHONE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New p53 variants e.g. with oligomerisation leucine zipper - useful for treating hyper
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ļ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pages' 96-97;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and restenosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     POULENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RORER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   oligomerisation domain replaced by treating hyper-proliferative disorders,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    French.
```

```
В
                                                                 Q.
                                                                                          밁
                                                                                                              Qy
                                                                                                                                        밁
                                                                                                                                                            δÃ
                                                                                                                                                                                    Db
                                                                                                                                                                                                       γ
                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                  γQ
                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                        밁
밁
                  Ş
                                                                                                                                                                                                                                                                                                                                                                                             ΩV
                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 721
                                                    ÷
490
                     481
                                                                   421
                                                                                                                361
                                                                                                                                       310
                                                                                                                                                             301
                                                                                                                                                                                    250
                                                                                                                                                                                                          241
                                                                                                                                                                                                                                  190
                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                              130
                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity les 721; Conserv
                                                                                                                                                                                                                                                                                                                             70
                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                        10
                                         caggtgcagctgcagcagtctggggcagagcttgtgaggtcaggggcctcagtcaagttg
          ttggatagtgatggataggacatatttgaattggttgttacagaggccaggccagtctcca
                                                                                                   tcaggcggaggtggctctggcggtggcggatcggatgttttgatgacccaaactccactc
                                                                                                                                                 gatgctttggactattggggccaagggaccacggtcaccgtctcctcaggtggaggcggt
                                                                                                                                                                                                ctgcagctcafcagcctggcatctgaggacactgccgtctattattgtaatttttacggg
                                                                                                                                                                                                                                                                                        cctgaacagggcctggagtggattggatggattgatcctgagaatggtgatactgaatat
                                                                                                                                                                                                                                                                                                                                      tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg
                                                                                       tcaggcggagqtggctctggcggtggcggatcggatgttttgatgacccaaactccactc
                                                                                                                                      gatgctttggactactggggccaagggaccacggtcaccgtctcctcaggtggaggcggt
                                                                                                                                                                                    ctgcagctcagcagcctggcatctgaggacactgccgtctattattgtaatttttacggg
                                                                                                                                                                                                                                                                            cctgaacagggcctggagtggattggattgattcctgagaatggtgatactgaatat
                                                                                                                                                                                                                                                                                                                          tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg
                                                                                                                                                                                                                                                                                                                                                                       caggtgcagctgcaggagtcaggggcagagcttgtggggtcaggggcctcagtcaagttg
                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                      0,
                                                                                                                                                                                                                                                                                                                                                                                                                     Score 716.2; DB 18 Pred. No. 1.1e-196; 0; Mismatches 8;
                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                       240
                    540
                                                                   480
                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                          69
                                                                                                                                                                                                                                                                                                                                                                                               60
                                            489
                                                                                          429
                                                                                                               420
                                                                                                                                       369
                                                                                                                                                              360
                                                                                                                                                                                    309
                                                                                                                                                                                                           300
                                                                                                                                                                                                                                 249
                                                                                                                                                                                                                                                                               189
```

0

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
Claimed variants of protein p53 have at least part of the oligomerisation domain deleted and replaced by a leucine zipper domain. The mutants preferably also have at least part of the p53 transactivation domain (amino acids 1-74) deleted and replaced by the transactivating domain (TD) from herpes simplex virus viral protein vP16 (amino acids 411-490) or by a protein domain able to bind selectively to a transactivator, especially a single-chain
                                                                                                                   New p53
leucine
                                                                                                                                                                                                                                                                                                                                                                                                Chimeric
Chimeric
                                                                                                                                                                                                                                                                                                                                                                                                                                         Leucine zipper domain; LZD; oligomerisation domain; mutant; substitution; replacement; transaction; viral protein VP anti-oncogene; hyperproliferation; cancer; restenosis; SCEV; tumour suppression; apoptosis; single chain antibody variabl
                                                                                     Claim
                                                                                                                                                                                                                                                 17-JUL-1996;
                                                                                                                                                                                                                                                                      06-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                      Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            T86221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    721
                                                                                                        p53 variants e.g. with oligomerisation domain replaced by
ine zipper - useful for treating hyper-proliferative disorders,
cancer and restenosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gaaatcaaa 729
|| | |||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       agtggatcagggacagatttcacactgaaaatcaacagagtggaggctgaggatttggga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gagctgaaa 738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   agtggatcagggacagatttcacactgaaaatcaacagagtggaggctgaggatttggga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             standard;
                                                                                                                                                                                                       RHONE
                                                                                                                                                                                                                                                                                                                                                                                                    . .
                                                                                     Pages
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein variant S-325
                                                                                                                                                                                   Conseiller
                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
Herpes simple
                                                                                                                                                                                                       POULENC
                                                                                                                                                                                                                                                 96WO-FR01111
                                                                                    88-90; 133pp;
                                                                                                                                                                                                                                                                                                                        /*tag= a
/product=
/note= "Op
                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
1..1611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                 simplex virus
                                                                                                                                                                                                       RORER
                                                                                                                                                                                                                                                                                                              "Open reading frame ends with termination codons"
                                                                                                                                                                                                                                                                                                                                   S-325
                                                                                                                                                                                                       SA
                                                                                     French.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            coding sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              from
                                                                                                                                                                                                                                                                                                                                                                                                                                            variable domain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              t; mutein;
VP16; HSV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              720
```

```
밁
  멼
                       Š
                                                                       δÃ
                                                                                                밁
                                                                                                                       Ŋ
                                                                                                                                                밁
                                                                                                                                                                    Ş
                                                                                                                                                                                               밁
                                                                                                                                                                                                                    Ωy
                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                20
                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 antibody variable domain (SCFV). The present sequence encodes a specifically claimed 5325 variant designated 5-325 and comprising a SCFV domain, amino acids 75-325 of human wild-type p53 and a leucine zipper domain at the C-terminal. The p53 variants are more active and more stable tumour suppressors and apoptosis-inducing agents than wild-type p53 and are active where the wild-type protein is not, i.e. they are not inactivated by dominant negative or oncogenic mutants, nor by other cellular proteins (because the leucine zipper domain prevents formation of inactive mixed oligomers).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1611 BP;
  727
                       721
                                                  667
                                                                        661
                                                                                                607
                                                                                                                                              547
                                                                                                                                                                     541
                                                                                                                                                                                              4.87
                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                              427
                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                            367
                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                          307
                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                          247
                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                       187
                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Match
                                             gtttattattgctggcaaggtacacattctccgctcacgttcggtgctgggaccaagctg
                                                                                             gaaatcaaa
|| | ||]
                                                             gtttattattgctggcaaggtacacattctccgctcacgttcggtgctggcaccaagctg
                                                                                                                                                                                                        ttggatagtgatggaaagacatatttgaattggttgttacagagggccaggccagtctcca
                                                                                                                                                                                                                                                         actttgtcgg:taccattggacaaccagcctccatctcttgcaagtcaagtcaagtcagagcctc
                                                                                                                                                                                                                                                                                                       tcaggcggaggtggctctggcggtggcggatcggatgttttgatgacccaaactccactc
                                                                                                                                                                                                                                                                                                                                                                                                                                      gagctgaaa
                                                                                                                                                                                             ttggatagtgatggaaagacatatttgaattggttgttacagaggccaggccagtctcca
                                                                                                                                                                                                                                            actttgtcgg:taccattggacaaccagcctccatctcttgcaagtcaagtcagagcctc
                                                                                                                                                                                                                                                                                           tcaggcggaggtggctctggcggtggcggatcggatgttttgatgacccaaactccactc
                                                                                                                                                                                                                                                                                                                                                    gatgctttggactattggggccaagggaccacggtcaccgtctcctcaggtggaggcggt
                                                                                                                                                                                                                                                                                                                                                                                       ctgcagctcagcagcctggcatctgaggacactgccgtctattattgtaatttttacggg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tectgeacagettetggetteaacattaaagaetaetatatgeaetgggtgaageagagg
                                                                                                                                                                                                                                                                                                                                          gatgctttggactactggggccaagggaccacggtcaccgtctcctcaggtggaggcggt
                                                                                                                                                                                                                                                                                                                                                                                                    ctgcagctcagcagcctggcatctgaggacactgccgtctattattgtaatttttacggg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   caggtgcagc1:gcaggagtcaggggcagagcttgtggggtcaggggcctcagtcaagttg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tcctgcacagottctggcttcaacattaaagactactatatgcactgggtgaagcagagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  721; : Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
 729
735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             369 A; 443 C; 458 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98.2%;
98.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 716.2; DB 18
Pred. No. 1.5e-196;
0; Mismatches 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              341 T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1611;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                 666
                                                                       720
                                                                                                                        660
                                                                                                                                                606
                                                                                                                                                                                               546
                                                                                                                                                                                                                    540
                                                                                                                                                                                                                                              486
                                                                                                                                                                                                                                                                   480
                                                                                                                                                                                                                                                                                            426
                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
                                                                                                                                                                     600
                                                                                                                                                                                                                                                                                                                                          366
                                                                                                                                                                                                                                                                                                                                                                  360
                                                                                                                                                                                                                                                                                                                                                                                          306
                                                                                                                                                                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                                                                                                                       246
                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60
```

RESULT X58936 ID XE

X58936

standard;

DNA;

1135

۱<sub>%</sub> : آنها

```
밁
                         Ş
                                                             멍
                                                                                    ŞΩ.
                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 608; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chimeric
Chimeric
                                                                                                                                                                                                                                                                                                                                                                                                    derived growth factor receptor (PDFR-R TM). pJG718 expression vector was constructed by inserting a DNA segment encoding the A77 serv in frame with the PDGF-R TM sequence in plasmid vector pDisplay Murine tumour cells transformed to express A77-TM were able to bind a soluble form of the Fc alpha receptor, and the bound receptor was able to engage IgA molecules. This is an example of cells of the
                                                                                                                                                                                                                                               are used to treat cancer and infectious diseases or used as vaccines. The method allows for killing of target cells without targeting any particular antigen on the cell. This is advantages since many tumour cells and other target cells do not have define
                                                                                                                                                                                                                                                                                                                                      invention that have been transformed to express on their surface component which binds to an FC receptor of an effector cell. The transformed cell is targeted to an effector cell via the FC bindi component, and can be used as a vehicle to increase an effector
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This is the DNA sequence of a portion of vector pJG718 that codes for a fusion protein (see Y06273) comprising murine anti-Fc alpha receptor antibody A77 sFv and the transmembrane domain of platelet derived growth factor receptor (PDFR-R TM). pJG718 expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Single chain antibody; scFv; A77; IgA receptor; Fc receptor; Fc alpha receptor; platelet derived growth factor receptor; antibody engineering; cell surface expression; therapy; cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                X58936;
                                                                                                                                                                                                                                                                                                            cell-mediated immune response, such as cell lysis and phagocytosis, against an antigen associated with the cell. The transformed cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Plasmid pJG718 encoding scFv
                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Example 6; Fig 10A-E; 68pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cells expressing anti-Fc receptor binding components
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (MEDA-) MEDAREX INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    02-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10-JUN-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  W09928349-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23-AUG-1999
246 cctgcaaggcttctggttattcattcactgactacatcatattttgggtgaagcagagcc 305
                                                          186 agatccagctgcagcagactggacctgagctggtgaagcctggggcttcagtgaagatat 245
                62 cctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagaggc 121
                                                                                        Ν
                                                                          aggtgcagctgcagcagtctggggcagagcttgttgagggtcaggggcctcagtcaagttgt 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          vaccine;
                                                                                                                                                                                                   1135
                                                                                                                                                                                                                                  for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Goldstein J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus sp.
synthetic.
                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                  targeting.
                                                                                                                                                                                                   BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97US-0067232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98WO-US25556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
74..1135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          human;
                                                                                                                                                                                                  274 A;
                                                                                                                                    69.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Graziano
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ds
                                                                                                                                                                                                  273 C;
                                                                                                                       0;
                                                                                                                       Score 505; DB Pred. No. 7.2e 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A77-PDGR-R TM fusion
                                                                                                                                                                                                  310 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ,70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Keler
                                                                                                                                                                                                  278 T; 0 other;
                                                                                                                       DB 20;
7.2e-136;
hes 120;
                                                                                                                                                                                                                                                 This is advantageous do not have defined
                                                                                                                                                    Length 1135;
                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                        Fc binding
                                                                                                                       21;
                                                                                                                                                                                                                                                                                                                cells
                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                        D
```

```
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뭕
                                                                                                                        S X
                                                                                                                                                              X X
                                                                                                                                                                                         222X
                                                                                                                                                                                                                                                                                                                                             V36237
                                                                                                                                                                                                                                                                                                                                                          RESULT
                                                  PF . 27-OCT-1997;
                                                                              07-MAY-1998
(RHON ) RHONE-POULENC RORER SA
                                                                                                        WO9818825-A1
                                                                                                                                   Mus sp
                                                                                                                                                                        Single chain antibody; ScFv D3M; mouse; p53 protein; regulatory domain; p53 mutant; H273; W248; G281; p53-dependent trans-activating activity; restoration; tumour-suppressing activity; tumour ceil; treatment;
                                                                                                                                                           tumour-suppressing a
hyper-proliferation;
                                                                                                                                                                                                                                             DNA od ScFv D3M@which binds to mutant p53 proteins
                                                                                                                                                                                                                                                                           8661, das-80
                                                                                                                                                                                                                                                                                                      V36237;
                                                                                                                                                                                                                                                                                                                              V36237 standard; DNA;
                         29-0CT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                   906
                                                                                                                                                                                                                                                                                                                                                                                                                             701
                                                                                                                                                                                                                                                                                                                                                                                                                                                      846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  289
                                                                                                                                                                                                                                                                                                                                                          თ
                                                                                                                                                                                                                                                                                                                                                                                                                                                    | tgatgacccaaactccactcttgtcggttaccattggacaaccagcctccatctctt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctacc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tccctgacaggttcactggcagtggatcagggacagatttcacactgaaaatcaacagag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               agaggccaggccagtctccaaagcgcctaatctatctggtgtctaaactggactctggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gcaagtcaagtcagagcctcttggatagtgatggaaagacatatttgaatttggttgttac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tetetgeaggaggtggegeteeggaggaggtggeageggagggggggateegatgttg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tctcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggatgttt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         atctgaagttcaagggcaaggccacattgactgtagacaaatcttccagcacagcctaca 425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        atggaaagagccttgagtggactggaaataataatccttactatggtagtactagctaca
                                                                                                                                                                                                                                                                                                                                                                                            tcggtggaggcaccaagctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                             tcggtgctggcaccaagctggaaatcaaa 729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tocotgacaggttcactggcagtggatcaggacagatttcacactgaaaatcagcagag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                agaggccaggccagtctccaacgcgcctaatctatctggtgtctaaactggactctggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gcaagtcaagtcagagcctcttagatagtgatggaaagacatatttgaattggttgttac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tgatgacccagactccactctgtcgattaccattggacaaccagcctccatctctt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     attactacgglagtagctacgaggcgtttccttactggggccaagggactctggtcactg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ------aatttttacggggatgctttggactattggggccaagggaccacggtcaccg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tgcagctcaacagtctgacatctgaggactctgcagtctattactgtgtaagaggagttt 485
                                                                                                                                                                                                                                                                        (first
                         96FR-0013176
                                                   97WO-FR01921
                                                                                                                                                                                                                                                                        entry)
                                                                                                                                                                                                                                                                                                                              747
                                                                                                                                                                                                                                                                                                                              ВP
                                                                                                                                                                                                                                                                                                                                                                                                   934
                                                                                                                                                                                                                   oligomerisation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                         905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          288
```

```
Ş
                              밁
                                                                                      В
                                                                                                                δÃ
                                                                                                                                                 Ър
                                                                                                                                                                                                          밁
                                                      Ş
                                                                                                                                                                           Š
                                                                                                                                                                                                                                      80
                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                           멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 594; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present sequence encodes a single chain antibody (ScFv) designated DJM. The antibody binds to an epitope present in the C-terminal region of the p53 protein that includes oligomerisation and regulatory domains, specifically between positions 320 and 393. ScFv DJM is directed against p53 mutants, particularly HZ73, WZ48 and GZ81 mutants. When the ScFV is introduced into cells containing a mutant p53 protein, p53-dependent trans-activating activity is restored. ScFV DJM is specific for p53-mutants that have lost tumour-suppressing activity and are present in tumour cells. It is particularly used to treat hyper-proliferation associated with these mutants (e.g. cancer and re-stenosis) but may also be used in vitro for studying mechanisms of activity of p53 or its mutant and to purify or detect p53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Restoring p53-dependent trans-activating activity mutant p53 - by delivering single-chain antibody smutant, particularly for treatment of tumours
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 5; Page 32; 54pp; French.
 580
                                                          520
                                                                                        481
                                                                                                                     463
                                                                                                                                                                                403
                                                                                                                                                                                                            361
                                                                                                                                                                                                                                         343
                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                   292
                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cagaggccaggccagtctccaaagcgcctaatctatctggtgtctaaactggactctgga
                                                                           aaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag
                                                                                                                                                                ctgcagctcagcctggcatctgaggacactgccgtctattattgtaat------
                                                                                                                                                                                                                                                                                                                                                                                                       gccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                cctgaacagggcctggagtggattggattgatcctgagaatggtgatactgaatat 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1998-272140/24
gtccctgacaggttcactggcagtggatcagggacagatttcacactgaaaatcaacaga
                          cagaaaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctgga
                                                                                                      ctcacccagtctccatcttccctggctgtgtcagcaggagaaggtcgctatgagctgc
                                                                                                                                                                                                         tcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggacattgag
                                                                                                                                                                                                                        tcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggatgttttg
                                                                                                                                                                                                                                                                    tactatgaatacgacggctatgctttggactactggggccaagggaccacggtcaccgtc
                                                                                                                                                                                                                                                                                                                             ctgcacctcagcagcctgacatctgaggacacaaccgtctattactgtaatgcagtcatc
                                                                                                                                                                                                                                                                                                                                                                                        gccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                 cctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     caggtcaagctgcaggagtcaggggcagaacttgtgaggtcaggggcctcagtcaatttg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BP; 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bracco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              63.2%;
79.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ą,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ľ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       188 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 460.8;
Pred. No. 3.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     G; 165 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3; DB 19;
3.2e-123;
nes 132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          y to cell specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          containing for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                   540
639
                             600
                                                         579
                                                                                                                                                 480
                                                                                                                                                                              462
                                                                                                                                                                                                          420
                                                                                                                                                                                                                                        402
                                                                                                                                                                                                                                                                                                 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                             291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                   24 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ω
```

```
& x 66 6 6 6 6 6 6 8 8 8
                                                                                                                                                                                                                                                                                  PXFXPX
                                                                                                                                                                                                                                                                                                                                                    PN
                                                                                                                                                                                                                                                                                                                                                                                                                                                          胃胃
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                    Ĵ
          This nucleotide sequence encodes a fusion protein comrising of the Mgr6 single chain antibody (with the heavy and light chain joined by a linker), figed to the clavin protein. Clavin is an inhibitor protein, and functions by inactivating the ribosomes. Clavin or it conjugates are useful as anticancer and/or antiviral agents. The recombinant ribosomal inhibitor protein (RIP), Mgr6-clavin (a conjugation) is used as an immunoconjugate, and the complex and clavin of clavin) is used as an immunoconjugate, and the complex and claving the complex and claving ribosomal activity.
                                                                                                                             Claim 3;
                                                                                                                                                                                                                                   Colnaghi M, De Santis
                                                                                                                                                                                                                                                                                 27-JUN-1996;
                                                                                                                                                                                                                                                                                                                                                                                                             misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                          misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chimeric -
Chimeric -
                                                                                                                                                    cancer
                                                                                                                                                           DNA encoding Aspergillus protein, clavin - useful
                                                                                                                                                                                                  P-PSDB;
                                                                                                                                                                                                            WPI; 1998-077109/07.
                                                                                                                                                                                                                                                                                                                              31-DEC-1997.
                                                                                                                                                                                                                                                                                                                                                     W09749726-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Recombinant ribosomerotein syntheses;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   V09256 standard;
                                                                                                                                                                                                                                                         (TTUY-) ITAL
                                                                                                                                                                                                                                                                                                       26-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   07-JUL-1998 (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            V09256;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               fusion protein; chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ttcggtgctgycaccaagctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gtgcaggctgaagacctggcagtttattactgcaagcaa---tcttataatctaccgacg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gtggaggctgággatttgggagtttattattgctggcaaggtacacattctccgctcacg
                                                                                                                             Page 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sequence encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Aspergillus clavatus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ribosomal inhibitor protein; Rthesns; conjugate; Mgr6-clavin;
                                                                                                                                                                                                                                                          MIN UNIV RICERCA SCI
                                                                                                                                                                                                                                                                                 96IT-F100155
                                                                                                                                                                                                                                                                                                       97WO-EP03359
                                                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag= a
:/product=
108..861
                                                                                                                                                                                                                                                                                                                                                                                                              861..1314
                                                                                                                                                                                                                                                                                                                                                                                                                       /*tag= b
/product= "Single Fv
/note= "derived from
                                                                                                                                                                                                                                                                                                                                                                          /*tag= c
/product= "Clavin"
/note= "derived fr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cDNA;
                                                                                                                            26pp;
                                                                                                                                                                                                                                   70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1314
                                                                                                                             English.
                                                                                                                                                              clavatus-derived ribosomal as an immuno-conjugate and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Mgr6-clavin
                                                                                                                                                                                                                                   Mele A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ΒP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the Mgr6-clavin immunotoxin
                                                                                                                                                                                                                                                                                                                                                                           from
                                                                                                                                                                                                                                                           ę,
                                                                                                                                                                                                                                                          TECNOLOGICA.
                                                                                                                                                                                                                                    Parente D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            747
                                                                                                                                                                                                                                                                                                                                                                                                                           ž č
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      immunotoxin"
                                                                                                                                                                                                                                                                                                                                                                                                                                   Mgr6"
                                                                                                                                                                                                                                                                                                                                                                           clavatus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RIP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           anticancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        clavin;
                                                                                                                                                               inhibitor
for treatment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        inhibition;
                                  conjugate
                                                                    its
                                                                                                                                                                of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       660
```

Sequence 1314 BF;

338

P.

360

Ç

359

ູດ

257

H

DB

Length

1314;

```
X58690

ID XX

XX

XX

XX

AC XI

AC 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 573; Conserv
                        Type II collagen; assay; antibody; rheumatoid arthritis; osteoarthritis; diagnosis; monoclonal antibody 5109; MAb; antibody engineering; scfv; single chain antibody; ss.
                                                                                                                                      Monoclonal
                                                                                                                                                                                        16-AUG-1999
                                                                                                                                                                                                                                                                                             X58690 standard; DNA; 907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            475
                                                                                                                                                                                                                                                                                                                                                                                                                              826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 caggtgcagctgcagcagtctggggcagagcttgtgaggtcaggggcctcagtcaagttg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         aagctggagctgaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                       aagctggaaatcaaa 729
||||||||| | | | | |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ttgggagtttattattgctggcaaggtacacattctccgctcacgttcggtgctggcacc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     actggcagtggatcagggacagatttcacactgaaaatcaacagagtggaggctgaggat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cctgaacagggcctggagtggattggattggattgatcctgagaattggtgatactgaatat 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          caggtgcagctgcaggagtctggggcagagcttgtgaagccaggggcctcagtcaagttg 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 actgcaacatattactgtcagcacagttgggagattcctcggacgttcggtggagggacc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ccacccaaactcctcatcaagtatgcatccaacctagaatctggggtccctgccaggttc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tctccaaagcgcctaatctatctggtgtctaaactggactctggagtccctgacaggttc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     agtgtc---agtacatctaggtatagttatatgcactggtaccaacagaaaccaggacag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   agcctcttggatagtgatggaaagacatatttgaattggttgttacagaggccaggccag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ccactcactttgtcggttaccattggacaaccagcctccatctcttgcaagtcaagtcag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ggcggttcaggcggaggtggctctggcggtggcggatcggatgttttgatgacccaaact 414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gacccgaagttccagggcaaggccactataacagcagacacatcctccaacacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctac 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cctgaacagggcctggagtggattggaaggattgatcctgcgaatggtaatactaaatat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tcctgcacagcttctggcttcaacattaaagacacctatatgcactgggtgaagcagagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                     (first entry)
                                                                                                                                   5109 VH-VL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              62.0%;
78.0%;
                                                                                                                                                                                                                                                                                             ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 452.2;
Pred. No. 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   red. No.. 1.2e-120;
Mismatches 153;
                                                                                                                                   SCFV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2;
```

Ş

2 aggtgcagctgcagcagtctggggcagagcttgtgaggtcaggggcctcagtcaagttgt 61

Query Match
Best Local Similarity
Matches 553; Conserv

Conservative

0

Score 435; DB Pred. No. 9e-1: 0; Mismatches

; DB 20; 9e-116;

Length

175;

Indels

ω

Gaps

1;

59.7%; 75.6%;

```
## 686666666666666666666666666
| Transport
                                                This DNA sequence codes for a single chain antibody (see v06132) comprising the heavy and light chain variable regions of a novel murine monoclonal antibody (MAb), 5109, that is specific for type II collagen necepitopes. The sequence was assembled using a splicing by overlap extension (SOEing) method in pCANTAB6. E. coli containing the 9A4 scfv antibody plasmid is deposited as ATCC 98594. A claimed method for monitoring biological media for protein fragments, especially those generated by collagenase cleavage of articular cartilage or type II collagen, involves: contacting the biological media with a capture antibody that is active against the collagen peptides given in Y06122 and Y06123; contacting the biological media with a detection antibody that is active against the collagen fragments given in Y06124 and Y06125; and detection antibody, and then the capture antibody. The method is useful for monitoring collagen fragments bound to the capture and detection antibody, and then the capture antibody. The method is useful for monitoring collagen fragments in biological media, and for assessing the breakdown of type II collagen by collagenase in normal and pathological (rheumatold arthritis, osteoarthritis) conditions.

MAb 5109, and eagineered versions of it, are specific for type II collagen and can be used to detect type II collagen fragments in body fluids independent of the method used to generate the collagen
 Sequence 907
                                        metabolite.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus.
Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example 7; Page 37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and/or detection antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Monitoring biological media
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         09-JUN-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EP921395-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (PFIZ ) PFIZER PROD INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1999-315488/27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Johnson KS,
   BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /transl_except= (
)/transl_except= (
29.94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                97US-0065423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  :/*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .98EP-0309266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note=."PCR-generated sequence"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note= "engineered 5109 VH-VL
replace(738,C)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note= "engineered signal peptide initiator Met is probably
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              95..895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers 29..898
   218
 Α;
   208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mezes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTG codon"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      English.
   Ç.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PS,
   251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (pos:839.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              collagen
   <u>ი</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Otterness
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    error; Val
230 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ..841,
..871,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              fragments, using capture
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SCFV'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        aa:Gln)
aa:Ala)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    codon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 in pCANTAB4; coded for by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     native
```

XX PR XDXPX

```
RESULT
X77245
В
                                                                                                                                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                                                                                                                                Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                               ID
                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                    27-MAY-1999
          16-NOV-1998;
                                                                                                              Binding sit
autoimmune
                                                             WO9925818-A1
                                                                                                                                                    Mouse scFV fragment 4-7 encoding DNA
                                                                                                                                                                               04-AUG-1999
                                                                                                                                                                                                                               X77245
                                                                                                                                                                                                                                                                                             816
                                                                                                                                                                                                                                                                                                                                                                          659
                                                                                                                                                                                                                                                                                                                                                                                                  696
                                                                                                                                                                                                                                                                                                                                                                                                                                                   636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 362
                                                                                                                                                                                                                                                                                                                       719
                                                                                                                                                                                                                                                                                                                                                756
                                                                                                                                                                                                                                                                                                                                                                                                                          599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         62
                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                            tggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            agtgcagctggtggagtctgggggaggctcagtgcagcctggagggtccctgaaactct
                                                                                                                                                                                                                                                                                             tggagctgaaa
                                                                                                                                                                                                                                                                                                                                             gagtttattattgctgccaaggtacacattttcctcacacgttcggtgctgggaccaagc
                                                                                                                                                                                                                                                                                                                                                            gagtttattattgctggcaaggtacacattctccgctcacgttcggtgctggcaccaagc
                                                                                                                                                                                                                                                                                                                                                                                                gcagtggatcagggacagatttcacactgaaaatcagcagagcggaggctgaagatttgg
                                                                                                                                                                                                                                                                                                                                                                                                            gcagtggatcagggacagatttcacactgaaaatcaacagagtggaggctgaggatttgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                  caaagcgcctaatctttctggtgtctgaattggactctggagtccctgacaggttcactg
                                                                                                                                                                                                                                                                                                                                                                                                                                                            caaagcgcctaatctatctggtgtctaaactggactctggagtccctgacaggttcactg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tcttggatagtgatggaaagacatatttgaattggttgttacagaggccaggccagtctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tcactttgtcggttaccattggacaatcagcctccatctcttgcaagtcaagtcagagcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tcactttgtcggttaccattggacaaccagcctccatctctttgcaagtcaagtcagagcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       caggcggaggtggcagcggcggtggcggatcgtctgatgttgtgatgacccaaactccac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      caggcggaggtggctctggcggtggcggatcg---gatgttttgatgacccaaactccac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gtaattacgctcgctggggccaaggggcgctggtcactgtctcgagtggtggaggcggtt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       atgctttggactattggggccaagggaccacggtcaccgtctcctcaggtggaggcggtt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tgcaaatgaacaggctgaagtctggggactcaggcatgtattactgtgtaagaggatata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tgcagctcagcagcctggcatctgaggacactgccgtctattattgtaatttttacgggg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cagacagtgtgaagggccgattcaccatttccagagacaatgccaaaaacaccctgtatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctacc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cagacaagaggctggagtgggtcgcaaccattaatagtaatggtggtctcaccttttatg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cctgtgcagcctctggattcactttcaatacctacggcatgtcttgggttcgccagactc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagaggc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tcttaggtagtgattgacatatttgatttggttgttgcagaggccaggccagtctc
                                                                                                                                                                                                                               standard; DNA; 753
                                                                                                                          site
                                                                                                             disease;
                                                                                                                                                                             (first entry)
                                                                                                             domain; BSD; epitope; fusion protein; therapeutic; isease; scfv-antibody; single-chain fv; mouse; ss
          98WO-EP07313
                                                                                                                                                                                                                                                                                             826
                                                                                                                                                                                                                                                                                                                       729
                                                                                                                            cancer;
                                                                                                                                                                                                                                                                                                                                                815
                                                                                                                                                                                                                                                                                                                                                                                                                          658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                   695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1555
```

Sequence 753

BP; 171 A; 188 C;

215 G; 179 T; 0

other;

```
CC (BSD) that retain the capacity of binding to a predetermined epitope when CC (BSD) that retain the capacity of binding to a predetermined epitope when CC positioned C-terminal of at least one further domain in a recombinant bicor or multivalent polypeptide. The method comprises (a) testing a panel of CC BSD displayed on the surface of a biological display system as part of a CC fusion protein for binding to a predetermined epitope, where the fusion protein comprises an additional domain positioned N-terminal of the BSD CC and an amino acid sequence that mediates anchoring of the fusion protein CC to the surface of the display system; and (b) identifying a BSD that CC binds to the predetermined epitope. The method is useful to identify bicor or multivalent polypeptides that comprise antibody binding sites capable CC efficiently binding to the corresponding antigen. The polypeptides or CC diagnostically, for e.g. cancer and autoimmune diseases. ScFv-antibody cindenders ishat bind independently of their position within bifunctional CC single-chain fusion proteins can be isolated from combinatorial antibody comprise using the new in vitro method. Sequences x77240-248 represent XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Phage display system for identification retaining capacity to bind an epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1999-338004/28
P-PSDB; Y17962.
                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure; Fig 6.8; 152pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Borschert K, Kufer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (KUFE/) KUFER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              97EP-0120096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ש
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lutterbuese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ά
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ō,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Raum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Zettl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             domains
```

```
, 40
,
                                                      Ď
 В
                                                                                                            밁
                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                       Q
                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                     δÃ
                                                                                                                                                                밁
                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 561; Conserv
                                                                                 345
                                                                                                                                                                                        246
 429
                           405
                                            369 ctcaggtggtggttgttctggcggcggctccggtggtggtggttctgagctcgtgat
                                                                                                           3 0 9
                                                                                                                                        288
                                                                                                                                                                 249
                                                                                                                                                                                                                      189
                                                                                                                                                                                                                                                186
                                                                                                                                                                                                                                                                             129
                                                                                                                                                                                                                                                                                                       126
                                                                                                                                                                                                                                                                                                                                  69
                                                                                                                                                                                                                                                                                                                                                             66
                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                  σ
                                                                 ctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggatgttttgat
                                                                                                                         acagggcctggagtggattggatggattcctgagaatggtgatactgaatatgcccc
               gacccaaactccactctcactttgtcggttaccattggacaaccagcctccatctctttgcaa
                                                                                                          cgatactaactacgactggtacttcgatgtctggggccaagggaccacggtcaccgtctc
                                                                                                                                                                           gctcagcagcctggcatctgaggacactgccgtctattattg-----
                                                                                                                                                                                                                                   gaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctacctgca
                                                                                                                                                                                                                                                                          acaggtccttgagtggattggagaggtttatcctagaattggtaatgcttactacaatga
                                                                                                                                                                                                                                                                                                                                                cacagcttctqgcttcaacattaaagactactatatgcactgggtgaagcagaggcctga 125
                                                                                                                                                                                                                                                                                                                                                                                                    gcagctgcagcagtctggggcagagcttgtgaggtcaggggcctcagtcaagttgtcctg
gacccagactccactctccctgcctgtcagtcttggagatcaagcctccatctcttgcag
                                                                                                                                                                gctccgcagcctgacctctgaggactctgcggtctatttctgtgcaagacggggatccta
                                                                                                                                                                                                                      gaagttcaagggcaaggccacactgactgcagacaaatcctccagcacagcgtccatgga
                                                                                                                                                                                                                                                                                                                                  caaggcttctqgctacaccttcacaaactatggtttaagctgggtgaagcagaggcctgg
                                                                                                                                                                                                                                                                                                                                                                                     gctgctcgagcagtctggagctgagctggcgaggcctggggcttcagtgaagctgtcctg
                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                         59.3%;
75.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                            ed. No. 5.4e-115;
Mismatches 163;
                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 753;
                                                                                                                                                                                                                                                                                                                                                                                                                                             21;
                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                       428
                                                                                                                                                                                                                                                                                                        185
  488
                                                                                   404
                                                                                                                                                                                                                                                                              188
                                                                                                                                                                                                                                                                                                                                                                                        89
                                                                                                                                                                                                                                                                                                                                                                                                                  65
                                                                                                              368
                                                                                                                                        344
                                                                                                                                                                 308
                                                                                                                                                                                                                                                  245
                                                                                                                                                                                             287
                                                                                                                                                                                                                      248
                                                                                                                                                                                                                                                                                                                                                                                                                                             ۲,
```

Ş

465

gtcaagtcagagcctcttggatagtgatggaaagacatatttgaattggttgttacagag

Q DЪ

밁

2

```
RESULT
Q90663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                          Antibody of colore
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Antibody;
therapy; d
This sequence represents the coding sequence for the MFE-23 antibody. The encoded protein is an antibody against carcinoembryonic antigen (CEA). CEA is a marker antigen for cancer imaging and therapy. The MFE-23 antibody sequence was obtained using phage technology. In this process, mice were immunised with CEA. The antibody variable region genes obtained from these mice were then amplified from CDNA and cloned as a single chain FV (scFV) into bacteriophage vectors, producing a
                                                                                     Claim 3;
                                                                                                                                                                         Begent RHJ,
                                                                                                                                                                                                                    03-DEC-1993;
                                                                                                                                                                                                                                          05-DEC-1994;
                                                                                                                                                                                                                                                               08-JUN-1995
                                                                                                                                                                                                                                                                                    WO9515341-A1
                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                                                                                                                                                               misc_feature
                                                                                                                                                                                                                                                                                                                                                                                               misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MFE-23 antibody coding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         26-JAN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q90663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q90663 standard;
                                                                                                                                                                                              (CANC-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10
                                                                                                          colorectal cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1995-215234/28
DB; R75719.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gccaggccagtctccaaagcgcctaatctatctggtgtctaaactggactctggagtccc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  atctagtcagagccttgtacacagtaatggaaacacctatttacattggtacctgcagaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ggctgaggatttgggagtttattattgctggcaaggtacacattctccgctcacgttcgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             agacaggttcagtggcagtggatcaggacagatttcacactcaagatcagcagagtgga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tgacaggttcactggcagtggatcagggacagatttcacactgaaaatcaacagagtgga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gccaggccagtctccaaagctcctgatctacaaagtttccaaccgattttctggggtccc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u> ggctgaggatctgggagtttatttctgctctcaaagtacacatgttccgtacacgttcgg</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CANCER
                                                                                                                                                                                                                                                                                                                                                                                                                                                    diabody;
                                                                                                                      for
                                                                                    Page 48-49; 72pp;
                                                                                                                   carcinoembryonic antigen
                                                                                                                                                                         Chester
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first
                                                                                                                                                                                              RES CAMPAIGN TECHNOLOGY
                                                                                                                                                                                                                    93GB-0024807
                                                                                                                                                                                                                                          94WO-GB02658
                                                                                                                                                                                                                                                                                                                                                          /note= "variable heavy chain"
439.483
                                                                                                                                                                                                                                                                                                                               /note= "linker region" 484..801
                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                          /note=
                                                                                                                                                                                                                                                                                                                                                    /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    carcinoembryonic antigen; CEA; colorectal tumour; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        entry)
                                                                                                                                                                         KA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     810
                                                                                                                                                                                                                                                                                                         "variable light chain"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sequence
                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                         Hawkins RE;
                                                                                     English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              729
                                                                                                                      1
                                                                                                                   for treatment and
                                                                                                                     diagnosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   548
```

RESULT 288358

11

많

781

ggcaccaagctggagctgaaa

```
δÃ
                                             밁
                                                                      Š
                                                                                          . B
                                                                                                                                 Š
                                                                                                                                                              밁
                                                                                                                                                                                            Š
                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                     ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ρV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         library. The phages that bound to biotinylated CEA were selected and amplified, and this sequence (and the protein it encodes) were selected. The MFE-23 antibody was found to have good specificity and affinity for CEA, meaning that it can be used in targeted anti-tumour theraples. A humanised antibody with the complementarity determining regions of MFE-23 may be made by CDR grafting. The antibody may be used for the treatment by surgery or therapy of a colorectal tumour, or in the diagnosis of a colorectal tumour. WFE-23 may also be used to make diabodies (bivalent or bispecific antibody fragments which bind to two different antigens),
                                             -721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and
709 ggcaccaagctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local v
                                                           649 'gaggatttggyagtttattattgctggcaaggtacacattctccgctcacgttcggtgct
                                                                                                      661
                                                                                                                                                                601
                                                                                                                                                                                             529
                                                                                                                                                                                                                           559
                                                                                                                                                                                                                                                        469
                                                                                                                                                                                                                                                                                      499
                                                                                                                                                                                                                                                                                                                    409
                                                                                                                                                                                                                                                                                                                                                439
                                                                                                                                                                                                                                                                                                                                                                             349
                                                                                                                                                                                                                                                                                                                                                                                                           379
                                                                                                                                                                                                                                                                                                                                                                                                                                        292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    139
                                                                                                                                  589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              may
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            caggtgcagctgcagcagtctggggcagagcttgtgaggtcaaggggcctcagtcaagttg
                                             gaagatgctgccacttattactgccagcaaaggagtagttacccactcacgttcggtgct
                                                                                                                    aggttcactggcagtggatcagggacagatttcacactgaaaatcaacagagtggaggct
                                                                                                                                                                               ggccagtctccaaagcgcctaatctatctggtgtctaaactggactctggagtccctgac
                                                                                                                                                                                                                                         agtcagagcctcttggatagtgatggaaagacatatttgaattggttgttacagaggcca
                                                                                                                                                                                                                                                                                                                                                              ctgcagctcagcagcctggcatctgaggacactgccgtctattattgtaat------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cctgaacagggcctggagtggattggatggattgatcctgagaatggtgatactgaatat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg
                                                                                                     cgcttcagtggcagtggatctgggacctcttactctctcacaatcagccgaatggaggct
                                                                                                                                                             ggcacttctcccaaactctggatttatagcacatccaacctggcttctggagtccctgct
                                                                                                                                                                                                                           agctcaagtgta----
                                                                                                                                                                                                                                                                                    cagtetecageaateatgtetgeatetecaggggagaaggteaceataacetgeagtgee
                                                                                                                                                                                                                                                                                                               caaactccactcacttgtcggttaccattggacaaccagcctccatctcttgcaagtca
                                                                                                                                                                                                                                                                                                                                                ggtggaggcggttcaggcggaggtggctctggcggttggcggatcagaaaatgtgctcacc
                                                                                                                                                                                                                                                                                                                                                                                                         ccgactgggccgtactactttgactactggggccaagggaccacggtcaccgtctcctca
                                                                                                                                                                                                                                                                                                                                                                                                                          |---ttttacg3ggatgcttttggactattggggccaagggaccacggtctcctca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ctgcagctcagcagcctgacatctgaggacactgccgtctattattgtaatgaggggact
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tcctgcacagcttctggcttcaacattaaagactcctatatgcactggttgaggcagggg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            caggigaaactgcagcagictggggcagaacttgtgaggtcagggacctcagtcaagttg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cctgaacagggcctggagtggattggattgatcctgagaatggtgatactgaatat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              be linked to an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BP; 189 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     59.3%;
76.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            antitumour agent or a detectable label.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               220 C; 222 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 432.2;
Pred. No. 5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  432.2; DB 16;
No. 5.5e-115;
                                                                                                                                                                                                                           -agttacatgcactggttccagcagaagcca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                179 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      810;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                           438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      378
                                                                          708
                                                                                                      720
                                                                                                                                    648
                                                                                                                                                                660
                                                                                                                                                                                             588
                                                                                                                                                                                                                           600
                                                                                                                                                                                                                                                        528
                                                                                                                                                                                                                                                                                      558
                                                                                                                                                                                                                                                                                                                  468
                                                                                                                                                                                                                                                                                                                                                498
                                                                                                                                                                                                                                                                                                                                                                             408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60
```

```
Š
                                                밁
                                                                            Ş
                                                                                                             В
                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                an antibody which specifically interacts with the extracellular domain of CC the human zeta-chain. The antibody whose CDR of a variable region is encoded by (1), is obtained by immunising a rat with jurkat cells and CC encoded by (1), is obtained by immunising a rat with jurkat cells and CC extractions with a conjugate comprising a carrier molecule and a copyride having 11 N-terminal amino acids of a rat zeta-chain. The CC enti-zeta-chain antibody is useful for the treatment and prevention of CC autoimmune diseases, immune deficiencies, T-cell malignancies, in fectious diseases, immune deficiencies, T-cell malignancies, CC or viral infections. The antibody, and fragments of it, can be useful for the enhancement or suppression of NK-cell dependent immunity or for the CC treatment of NK-cell derived malignancies. It can also be useful for the CC treatment of the cell derived malignancies. It can also be useful for the CC treatment of their precursors. The present sequence encodes a bispecific anti-zeta-chain/anti-EpCAM antibody, from an example from
                                                                                                                                                                           Query Match
Best Local Similarity
Matches 561; Conserv
                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example 9; Page 74; 79pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New oligonucleotide, polypeptide, antibody useful for treating autoimmune disease, immune deficiencies, T-cell malignancies are infectious diseases -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Reiter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         09-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200003016-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Anti-zeta-chain antibody 2-B-5; rat; human zeta chain; immunisation; complementary determining region; CDR; autoimmune disease; cytostatic; immune deficiency; T-cell malignancy; infectious disease; antiviral; immunosuppressive; antimicrobial; immune response modulator; NK-cell;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bispecific anti-zeta-chain/anti-EpCAM antibody nucleotide sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  04-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                288358
                                                885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (CONN-) CONNEX GMBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10-JUL-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20-JAN-2000
                126
                                                                                                               825
                                                                               66
                                                                                                                                           σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                present invention describes a nucleic acid molecule (I) encoding
caaggcttctggctacaccttcacaaactatggtttaagctgggtgaagcagaggcctgg 944
                                                               cacagettetggetteaacattaaagaetaetatatgeaetgggtgaageagaggeetga 125
                                                                                                            gctgctcgagcagtctggagctgagctggcgaggcctggggcttcagtgaagctgtcctg
                                                                                                                            gcagctgcagcagtctggggcagagcttgtgaggtcagggggcctcagtcaagttgtcctg 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000-160926/14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                standard;
                                                                                                                                                                                                                                                         1637 BP; 398 A; 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complementary determining region (CDR) of a variable region
                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98EP-0112867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99WO-EP04838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA;
                                                                                                                                                                                          59.3%;
75.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BP
                                                                                                                                                                           Score 432.2;
Pred. No. 7.1e
0; Mismatches
                                                                                                                                                                             0
                                                                                                                                                                                                                                                         Ç
                                                                                                                                                                                                                                                         436
                                                                                                                                                                                                                                                         <u>ი</u>
                                                                                                                                                                                                                                                         399
                                                                                                                                                                                          DB 21;
                                                                                                                                                                                                                                                         T; 0
                                                                                                                                                                             163;
                                                                                                                                                                                                                                                         other;
                                                                                                                                                                             Indels
                                                                                                                                                                                                       Length
                                                                                                                                                                                                            1637;
                                                                                                                                                                           ž1;
                                                                                                                                                                                                                                                                                                                                                                                    malignancies,
be useful for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and
                                                                                                                                                                         Gaps
                                                                                                             884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of.
```

·... ..

```
r 1 7 X
XX DR XX PX XX
                                                                                                                                                                                                                                             XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δδ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QΥ
                                                                                                                                                                             PXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                       γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Вp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Дd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                       " (KUEE/) KUFER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1485
                                                                                                  17-NOV-1997;
                                                                                                                                                                                                       Mus
                                                                                                                                                                                                                                                                                                                                                                                                                 1545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1065
         P-PSDB;
                        WPI; 1999-338004/28
                                               Borschert K,
                                                                                                                                                     27-MAY-1999
                                                                                                                                                                               WO9925818-A1
                                                                                                                                                                                                                                 autoimmune
                                                                                                                                                                                                                                             Binding
                                                                                                                                                                                                                                                                      Mouse
                                                                                                                                                                                                                                                                                                04-AUG-1999
                                                                                                                                                                                                                                                                                                                          X77241;
                                                                                                                                                                                                                                                                                                                                                 X77241 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1005
                                                                                                                            16-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1125
                                                                                                                                                                                                                                                                                                                                                                                                                                          705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        945
                                                                                                                                                                                                                                                                                                                                                                          12
                                                                                                                                                                                                                                                                                                                                                                                                               agggggaccaagcttgagatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                             tgctggcaccaagctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ggctgaggathtgggagtftaffaftgctggcaaggfacacafftctccgctcacgftcgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tgacaggttcactggcagtggatcagggacagatttcacactgaaaatcaacagagtgga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gccaggccagtctccaaagcgcctaatctatctggtgtctaaactggactctggagtccc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       atctagtcagagccttgtacacagtaatggaaacacctatttacattggtacctgcagaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gtcaagtcagagcctcttggatagtgatggaaagacatatttgaattggttgttacagag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gacccaaactccactttgtcggttaccattggacaaccagcctccatctctttgcaa 464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ctcaggtggabgcggttcaggcggaggtggctctggcggttggcggatcggatgttttgat 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctacctgca 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ggctgaggatctgggagtttatttctgctctcaaagtacacatgttccgtacacgttcgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    agacaggttcagtggcagtggatcagggacagatttcacactcaagatcagcagagtgga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gccaggccagtctccaaagctcctgatctacaaagtttccaaccgattttctggggtccc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gacccagactocactctccctgcctgtcagtcttggagatcaagcctccatctcttgcag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cgatactaactacgactggtacttcgatgtctggggccaagggaccacggtcaccgtctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ---taatttttacggggatgctttgggactattggggccaagggaccacggtcaccgtctc 344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gctccgcagcotgacctctgaggactctgcggtctatttctgtgcaagacggggatccta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gaagttcaagygcaaggccacactgactgcagacaaatcctccagcacagcgtccatgga 1060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     acaggtccttyagtggattggagaggtttatcctagaattggtaatgcttactacaatga
                                                                                                                                                                                                                                                                      SCFV
          Y17958
                                                                                                                                                                                                                              site domain; BSD; epitope; fusion protein; therapeutic;
une disease; scFv-antibody; single-chain Fv; mouse; ss.
                                                                                                                                                                                                                                                                      fragment
                                                                                                                                                                                                                                                                                               (first entry)
                                                Kufer
                                                                                                  97EP-0120096
                                                                                                                            98WO-EP07313
                                                                                                                                                                                                                                                                                                                                                  DNA;
                                                                                                                                                                                                                                                                      3-5
                                               φ,
                                                                                                                                                                                                                                                                     encoding
                                                Lutterbuese R,
                                                                                                                                                                                                                                                                                                                                                   ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                           729
                                                                                                                                                                                                                                                                      DNA.
                                                Raum
                                               Zettl
                                                                                                                                                                                                                                             cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              287
```

```
망
                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                    멍
                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                              В
                                                                                                                                                               δõ
                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                   Š
                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to a method of identifying binding site domains (C) (BSD) that retain the capacity of binding to a predetermined epitope when CC positioned C-terminal of at least one further domain in a recombinant bick or multivalent polypeptide. The method comprises (a) testing a panel of BSD displayed on the surface of a biological display system as part of a CC fusion protein for binding to a predetermined epitope, where the fusion CC protein comprises an additional domain positioned N-terminal of the BSD CC and an amino acid sequence that mediates anchoring of the fusion protein CC to the surface of the display system; and (b) identifying a BSD that CC binds to the predetermined epitope. The method is useful to identify bicc or multivalent polypeptides that comprise antibody binding sites capable of efficiently binding to the corresponding antigen. The polypeptides or antibodies identified by the method are useful therapeutically and CC diagnostically, for e.g. cancer and autoimmune diseases. ScFv-antibody C fragments that bind independently of their position within bifunctional C single-chain fusion proteins can be isolated from combinatorial antibody C libraries using the new in vitro method. Sequences X77240-248 represent XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Phage display system for identification of binding site domains retaining capacity to bind an epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 753 BP; 174 A;
                     585
                                                                                                                                489
                                                                                                                                                                                                        429
                                                                                                                                                                                                                                            405
                                                                                                                                                                                                                                                                               369
                                                                                                                                                                                                                                                                                                                                                      309
                                                                                                                                                                                                                                                                                                                                                                                                                               249
                                                                                                                                                                                                                                                                                                                                                                                                                                                              246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  126
                                                                                                                                                                   465
                                                                                                                                                                                                                                                                                                                   345
                                                                                                                                                                                                                                                                                                                                                                                          285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6
                                                                                                                                                                                                                                                                                                                                                                   ttgtaatttttacggggatgcttttggactattggggccaagggaccacggtcaccgtctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                acagggcctggagtggattggattgatcctgagaatggtgatactgaatatgcccc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       559;
tgacaggttcactggcagtggatcagggacagatttcacactgaaaatcaacagagtgga
                                                                                                                                                    gtcaagtcagagcctcttggatagtgatggaaagacatatttgaattggttgttacagag
                                                                                                                                                                                                                                                                                                ctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggatgttttgat
                                                                                                                                                                                                                                                                                                                                                                                                                                              gctcagcatgcctggcatctgaggacactgccgtctat-----ta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctacctgca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cacagettetggetteaacattaaagactactatatgeactgggtgaageagaggeetga 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gccaggccagtctccaaagctcctgatctacaaagtttccaaccgattttctggggtccc
                                                                         gccaggccagtctccaaagcgcctaatctatctggtgtctaaactggactctggagtccc
                                                                                                                             atctagtcagagccttgtacacagtaatggaaacacctatttacattggtacctgcagaa
                                                                                                                                                                                                      gacccagactccactctccctgcctgtcagtcttggagatcaagcctccatctcttgcag
                                                                                                                                                                                                                       gacccaaactccactttgtcggttaccattggacaaccagcctccatctcttgcaa 464
                                                                                                                                                                                                                                                                               cggtagtaactacgactggtacttcgatgtctggggccaagggaccacggtcaccgtctc
                                                                                                                                                                                                                                                                                                                                                                                                                             gctccgcagcctgacatctgaggactctgcggtctatttctgtgcaagacggggatccta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gaagttcaagggcaaggccacactgactgcagacaaatcctccagcacagcgtccatgga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           acagggccttgagtggattggagaggtttatcctagaattggtaatgcttactacaatga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      caaggcttctggctacaccttcacaagctatggtttaagctgggtgaagcagagaactgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gctgctcgagcagtctggagctgagctggtaaggcctgggacttcagtgaagctgtcctg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fig 6.4; 152pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        58.8%;
75.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 184 C; 216 G; 179 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 429; DB 20;
Pred. No. 4.5e-114;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        165;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 753;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         245
                                                                                                                                                                   524
                                                                                                                                                                                                        488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               188
                                                         608
                                                                                          584
                                                                                                                              548
                                                                                                                                                                                                                                                                                 428
                                                                                                                                                                                                                                                                                                                                                                                          344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               89
                     644
                                                                                                                                                                                                                                                                                                                                                        368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1;
```

```
RESULT 13
T58130
                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                     XYXX
                           A mammalian expression construct encoding a single chain antibod having binding specificity for Fc gamma RI, derived from the humanised anti-re gamma RI monoclonal antibody H22 was prepared (see T58129). A bispecific single chain polypeptide was produced by fusing the H22 ScFv to an anti-carcinoembryonic antigen (CEA) antibody. The H22-anti-CEA fusion protein was shown to bind both Fc gamma RI and CEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Humanised antibody; anti-Fc receptor; H22; bifunctional; bispecific; fusion protein; chimera; carcinoembryonic antigen; CEA; MFE-23; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Single chain anti-Fc gamma RI antibody fused to anti-CEA antibody cDNA
Sequence 1679
                                                                                                                                                Example 8; Fig 40; 115pp;
                                                                                                                                                                                         Recombinant, multi-specific anti-Fc receptor antibody molecules also comprise an anti-target portion, used for the treatment of
                                                                                                                                                                                            also
                                                                                                                                                                                                                                        P-PSDB; W11508
                                                                                                                                                                                                                                                    WPI; 1997-052242/05
                                                                                                                                                                                                                                                                                   Deo
                                                                                                                                                                                                                                                                                                                                            07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                          07-JUN-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chimeric -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chimeric -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    24-SEP-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          T58130 standard;
                                                                                                                                                                                                                                                                                                             (MEDA-) MEDAREX
                                                                                                                                                                                                                                                                                                                                                                                                                                   WO9640789-A1
                                                                                                                                                                                                                                                                                                                                                                                                      19-DEC-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        609 agacaggttcagtggcagtggatcagggacagatttcacactcaagatcagcagagtgga 668
                                                                                                                                                                                                                                                                                   YM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      agggggaccaagcttgagatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tgctggcaccaagctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ggctgaggatttgggagtttattattgctggcaaggtacacattctcccgctcacgttcgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ggctgaggatctgggagtttatttctgctctcaaagtacacatgttccgtacacgttcgg 728
                                                                                                                                                                             autoimmune
                                                                                                                                                                                                                                                                              Goldstein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
 BP; 404 A; 440 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              musculus.
                                                                                                                                                                                                                                                                                                                                                                        98660sn-0M96
                                                                                                                                                                                                                                                                                                                                           95US-0484172
                                                                                                                                                                                                                                                                                                               INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11..1672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note= "Encodes H22 VH-linker-VL fused via a second
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA;
                                                                                                                                                                                                                                                                                  'n
                                                                                                                                                                             disease and
                                                                                                                                                                                                                                                                                   Graziano
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  construct derived from anti-CEA antibody MFE-23, which is in turn linked to a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            c-myc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linker to the single chain
                                                                                                                                                English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tag followed
                                                                                                                                                                           pathogenic infection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      753
 480
                                                                                                                                                                                                                                                                                  'n,
 6
                                                                                                                                                                                                                                                                                   Somasundaram
 355
 Η,
 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VH-linker-VL
                                                                        produced
                                                                                                                    antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              704
```

Query Match
Best Local Similarity

58.3%; 76.4%;

Score 425. Pred. No.

.2; DB 18; 7.3e-113;

Length 1679;

```
밁
                                                                                                                                                                                                                                                                                                                                                                                δã
                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                  Synthetic.
                                                      antibody-dependent epidermal growth f
                                                                Multispecific single chain antibody; antibody H22; tumour cell; antibody-dependent cellular cytotoxicity; ADCC; HER 2/neu; infec
                                                                                                  H22-anti-CEA
                                                                                                                                                                    V08176
                                                                                                                                                                                                                                                                       1488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1086
                                                                                                                                                                                                                             1548
                                                                                                                                                                                                                                                                                                                                                             1368
                                                                                                                         25-JAN-1999
                                                                                                                                                                                                                                                                                                                                                                                 536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  846
                                                                                                                                                                                          14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                           agctggagctgaaa
                                                                                                                                                                                                                                                                                tgggagtttattattgctggcaaggtacacattctccggctcacgttcggtgctggcacca
                                                                                                                                                                                                                                                                                                                           ctggcagtggatcagggacagatttcacactgaaaatcaacagagtggaggctgaggatt
                                                                                                                                                                                                                                                                                                                                                                       ctccaaagcgcctaatctatctggtgtctaaactggactctggagtccctgacaggttca
                                                                                                                                                                                                                                                                                                                                                                                                                   cactcactttgtcggttaccattggacaaccagcctccatctcttgcaagtcaagtcaga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       agctggaaatcaaa
                                                                                                                                                                                                                                                                       ctgccacttattactgccagcaacggagtagttacccactcacgttcggtgctggcacca
                                                                                                                                                                                                                                                                                                                                                           ctcccaaactctggatttatagcacatccaacctggcttctggagtccctgctcgcttca
                                                                                                                                                                                                                                                                                                                                                                                                       gtgta--
                                                                                                                                                                                                                                                                                                                                                                                                                                                 cagcaatcatgtctgcatctccaggggagaaggtcaccataacctgcagtgccagctcaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gcggttcaggcggaggtggctctggcggttggcggatcagaaaatgtgctcacccagtctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gcggttcaggcggaggtggctctggcggttggcggatcggatgttttgatgacccaaactc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               agttccagggcaaggccacttttactacagacacatcctccaacacagcctacctgcagc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         agttccagggcaaggccactatgactgcagacacatcctccaatacagcctacctgcagc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           agggcctggagtggattggattgatcctgagaatggtgatactgaatatgccccga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     agggcctggagtggattggatggattgatcctgagaatggtgatactgaatatgccccga 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cagcttctggcttcaacattaaagactcctatatgcactggttgaggcaggggcctgaac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cagcttctggcttcaacattaaagactactatatgcactgggtgaagcagaggcctgaac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  aactgcagcagtctggggcagaacttgtgaggtcagggacctcagtcaagttgtcctgca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             agctgcagcagtctggggcagagcttgtgaggtcaggggcctcagtcaagttgtcctgca
                                                                                                                                                                    standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                  antibody construct
                                                                                                                                                                    CDNA;
                                                         factor
                                                                                                                                                                    1679
                                                       cytotoxicity; ADCC;
aptor; breast cancer;
                                                                                                                                                                    ВP
                                                                                                                                                                                                                                                                                                                                                                                                       -agttacatgcactggttccagcagaagccaggcactt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                  321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                 coding sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              143;
                                                        ovarian
                                                       cancer;
                                                                infection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30;
                                              SS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                           therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  1325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1205
                                                                                                                                                                                                                                                                                                                1487
                                                                                                                                                                                                                                                                                                                                       655
                                                                                                                                                                                                                                                                                                                                                           1427
                                                                                                                                                                                                                                                                                                                                                                                 595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1025
                                                                                                                                                                                                                                                                                             715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'n
```

```
δÃ
                                             Query Mat
Best Loca
Matches
                                                                                                                                                                                                              This sequence encodes the construct 321, which is a fusion between an anti-CEA antibody and a multispecific single chain antibody designated H22. The antibody can be used in the method of the invention for inducing antibody-dependent cellular cytotoxicity (ADCC) against a tumour cell which is characterised by overexpression of HER 2/neu or epidermal growth factor receptor (EGFR), comprises contacting the tumour cell with a multispecific protein molecule (preferably a single chain antibody) comprising: (a) an anti-Fc receptor antibody or an antigen binding comprising: (b) a portion which binds to HER 2/neu, and (c) a portion which binds to TERP meanting the tumour cell aportion which binds to HER 2/neu, and (c) a portion which
                                                                                                                                                    fragment; (b) a portion which binds to HER 2/neu; and (c) a portion which binds to EGFR. The method can be used for treating cancers especially breast cancer or ovarian cancer. The multispecific antibody can also be administered prophylactically to vaccinate a subject against infection by a target cell.
                                                                                                                                                                                                                                                                                                                                                                                                           comprising an anti-Fc a target cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    07-JUN-1996;
07-JUN-1995;
                                                                                                                          Sequence 1679
                                                                                                                                                                                                                                                                                                                                                                              Example 8; Fig 40;
                                                                                                                                                                                                                                                                                                                                                                                                                                            Specific killing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17-NOV-1998
                                                              Local
                œ
                                                                            Match
agctgcagcagtctggggcagagcttgtgaggtcaaggggcctcagtcaagttgtcctgca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1999-023374/02
DB; W73223.
                                             561;
                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDAREX
                                               Conservative
                                                                                                                         вP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      96US-0661052.
95US-0484172.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   96US-0661052
                                                                                                                                                                                                                                                                                                                                                                                                                                            0f
                                                                                                                          404 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ď
                                                                                                                                                                                                                                                                                                                                                                              57pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                          tumour cells - using a multi-specific molecule Fc receptor antibody and a portion which binds
                                                          58.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Graziano
                                                                                                                            440
                                               0;
                                             Score 425.2; DB 20;
Pred. No. 7.3e-113;
0; Mismatches 143;
                                                                                                                          Ç
                                                                                                                            480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       æ
                                                                                                                          <u>ن</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Somasundaram
                                                                                                                            355
                                                                                                                          T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                               Indels
                                                                            Length
                                               30;
                                             Gaps
                67
                                                                                                                                                                                                                                                                                                                                                                                                                               ៥
```

```
δδ.
                                                                           밁
                                                                                            ρV
                                                                                                                 밁
                                                                                                                                  δÃ
                                                                                                                                                                       Q
                                                                                                                                                                                             g
                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                Ϋ́
                                                                                                                                                       밁
                                                                                                                                                                                                                                                                       밁
                                      1206
  1266
                                                                           1146
                                                                                                                 1086
                                                                                                                                                       1026
                    416
                                                        356
                                                                                                                                   248
                                                                                                                                                                          188
                                                                                                                                                                                             966
                                                                                                                                                                                                                                   906
                                                                                                                                                                                                                                                                       846
                                                                                                                                                                                                                                                    8
                                  5 gcggttcaggcggaggtggctctggcggtggcggatcagaaaaatgtgctcacccagtctc
           cactcactttgtcggttaccattggacaaccagcctccatctcttgcaagtcaagtcaga
                                               cagcttctggcttcaacattaaagactactatatgcactgggtgaagcagaggcctgaac
cagcaatcatgtctgcatctccaggggagaaggtcaccataacctgcagtgccagctcaa
                                                                                                                                                                                                     agggcctggagtggattggatggattgatcctgagaatggtgatactgaatatgccccga
                                                                                                                                                                                                                                                                       aactgcagcagtctggggcagaacttgtgaggtcagggacctcagtcaagttgtcctgca
                                                                                                                                                                                            agggcctggagtggattggattgatcctgagaatggtgatactgaatatgccccga
                                                                                                                                                                                                                                 cagcttctggcttcaacattaaagactcctatatgcactggttgaggcaggggcctgaac
                                                                            1205
                                                                                                                 1145
                                                                                                                                                        1085
  1325
                                      1265
                                                         415
                                                                                              355
                                                                                                                                                                         247
                                                                                                                                                                                             1025
                                                                                                                                                                                                                187
                                                                                                                                                                                                                                                    127
                                                                                                                                                                                                                                                                       905
                                                                                                                                     295
                                                                                                                                                                                                                                   965
                                                                                                                                                                                                                                                                                                             r.
```

2

```
TRESULT IN THE SULT IN THE SUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1326
also be used in immunotherapy, affinity chromatography and isolation purification of PSA-ACT. Unlike prior art antibodies which bind to PSA-ACT complexes but may also bind PSA or ACT alone, the present antibody is specific for PSA-ACT alone. Diagnostic assays using the antibodies are more accurate in diagnosing prostate cancer as they on
                                                                                                                             compared to the levels in patients with benign or no growths in the prostate. Therefore detection of PSA in complex with ACT is useful for the early detection of prostate tumours, by distinguishing between benign and malignant conditions of the prostate as well as for the management of patients with prostate cancer, such as the disclosure of metastasis and the monitoring of the PSA levels affirst treatment. The antibodies 'may'
                                                                                                                                                                                                                                                                                                      The invention relates to an antibody that binds a complex between prostate-specific antigen (PSA) and anti-chymotrypsin (ACT), and has an affinity for the complex which is at least 10 fold higher than the affinity for either PSA or ACT alone. The antibody is used in diagnostic assays to detect PSA-ACT in serum samples from patients. The levels of PSA-ACT complex increase in patients suffering from prostate cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            03-DEC-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EP934953-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Prostate-specific diagnostic assay;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Antibody BIOC7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     X86942;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             X86942 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New anti-complex antibody useful for diagnosing prostate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (BOEF )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11-AUG-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ctccaaagcgcctaatctatctggtgtctaaactggactctggagtccctgacaggttca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                agctggagctgaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tgggagtttattattgctggcaaggtacacattctccgctcacgttcggtgctggcacca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ctggcagtggatcagggacagatttcacactgaaaatcaacagagtggaggctgaggatt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gtgta----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gcctcttggatagtgatggaaagacatatttgaatttggttgttacagaggccaggccagt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1999-432068/37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       agctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ctgccacttattactgccagcaacggagtagttacccactcacgttcggtgctggcacca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gtggcagtggatctgggacctcttactctctcacaatcagccgaatggaggctgaagatg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ctcccaaactctggatttatagcacatccaacctggcttctggagtccctgctcgcttca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ę
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BOEHRINGER MANNHEIM CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Page 28-30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sawyer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       encoding DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97US-0067428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98EP-0122546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PSA-ACT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Winter GP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         42pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ΒP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PSA; anti
prostate

    agttacatgcactggttccagcagaagccaggcactt

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            anti-chymotrypsin; ACT; antibody;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tumour;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cancer
     as they only
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 595
                                                                                                                 9
```

Job

time: 16451

sec

٠,

밁

71:5

gaaatcaaa

723

Search completed: February 17,

```
γ
                                       밁
                                                            ρ
                                                                                      뎞
                                                                                                                80
                                                                                                                                              밁
                                                                                                                                                                    δÃ
                                                                                                                                                                                                 밁
                                                                                                                                                                                                                        γ
                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                           γ
                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                             2
                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                   ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ន្តន្តន្តន
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    detect the intact
specific examples
sequence represent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
            721
                                       658
                                                              661
                                                                                         598
                                                                                                                   601
                                                                                                                                              538
                                                                                                                                                         541 aagcgcctaatctatctggtgtctaaactggactctggagtccctgacaggttcactggc
                                                                                                                                                                                                 478
                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                   418
                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                       358
                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                         298
                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                             247
                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           v
gaaatcaaa
                                                 gtttattattgctggcaaggtacacattctccgctcacgttcggtgctggcaccaagctg
                                                                                                   agtggatcagggacagatttcacactgaaaatcaacagagtggaggctgaggatttggga
                                                                                                                                                                                                             ttggatagtgatggaaagacatatttgaattggttgttacagagggccaggccagtctcca
                                                                                                                                                                                                                                                                actitgtcggitaccattggacaaccagcctccatctcttgcaagtcaagtcaagacctc
                                                                                                                                                                                                                                                                                                                  tcaggcggaggtggctctggcggtggcggatcggatgttttgatgacccaaactccactc
                                                                                                                                                                                                                                                                                                                                                                     gatgctttggactattggggccaagggaccacggtcaccgtctcctcaggttggaggcggt
                                                                                                                                                                                                                                                                                                                                                                                                                        ctgcagctcagcagcctggcatctgaggacactgccgtctattattgtaatttttacggg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cctgaacagggcctggagtggattggatggattgatcctgagaatggtgatactgaatat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    caggtgcagctgcagcagtctggggcagagcttgtgaggtcaaggggcctcagtcaagttg
                                    gtttattactgcatgcaaagtataca---
                                                                                       agcgggtcagggacagatttcacactgaaaaatcagccgggtggaggctgaggatgttggg
                                                                                                                                           cagetectgatetatgaagtttecaaceggttetetggagtgeeagataggttecagtgge
                                                                                                                                                                                               ctgcatagtgatggaaagacctatttgtattggtacctgcagaagccaggccagcctcca
                                                                                                                                                                                                                                                  tctctgtccgtcacccctggacagccggcctccatctcctgcaagtstagtcagaacctc
                                                                                                                                                                                                                                                                                                                                                         agagggastcggttttggggccaaggtaccctggtcaccgtctcnagtggtggaggcggt
                                                                                                                                                                                                                                                                                                                                                                                                           atggagctgagcagcctgagatctgaagacacggccgtgtattactgt-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         caggtgcagctggtgcagtctggggctgaggtgaagaagcctgggggcctcagtgaaggtc
                                                                                                                                                                                                                                                                                                   tcaggcggaggtggctctggcggtagtgcacttgatattgtgatgacccagactccactc
                                                                                                                                                                                                                                                                                                                                                                                                                                                               tcacagaagttcacagagtcaccattaccagggacacatccgcgagcacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cctggacaagggcttgagtggatggatggatcagcgcttacaatggtaacacaaaatat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tcctgcaaggcttctggttacacctttaccagctatggtatcagctgggtgcgacaggcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             549;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    represents the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B₽;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   complex of PSA-ACT. Sequences Y21880-884 represent of antibodies directed against PSA-ACT. The presents the nucleotide sequence of antibody BIOC7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         57.3%;
75.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ç;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 418; DB 20;
Pred. No. 6.4e-111
l; Mismatches 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             217
                                      gcttcactcgttcggccaagggaccaaggtg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             167;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12;
                                                                                                                                                                                                                                                                                                                                                                                                           -gca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                              720
                                                                                                                   660
                                                                                                                                                                     600
                                                                                                                                                                                                 537
                                                                                                                                                                                                                                                   477
                                                                                                                                                                                                                                                                            480
                                                                                                                                                                                                                                                                                                       417
                                                                                                                                                                                                                                                                                                                               420
                                                                                                                                                                                                                                                                                                                                                         357
                                                                                                                                                                                                                                                                                                                                                                                   360
                                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   50
                                                                                         657
                                                                                                                                             597
                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                                                                                                                                                             297
                                                                                                                                                                                                                                                                                                                                                                                                                                                               246
```

THIS PAGE BLANK (USPTO)

```
Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pending_Patents_NA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12370408 seqs, 2170871038 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-297-181-1
729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         February 17, 2001, 20:27:22; Search time 2148.34 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 caggtgcagctgcagcagtc.....gcaccaagctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GenCore version 4.5
Copyright (c) 1993 - 2000 Com
/cgn2_6/ptodata/2/pna/US6010_COMB.seq
/cgn2_6/ptodata/2/pna/US6011_COMB.seq
/cgn2_6/ptodata/2/pna/US6011_COMB.seq
/cgn2_6/ptodata/2/pna/US6013_COMB.seq
/cgn2_6/ptodata/2/pna/US6013_COMB.seq
                                                                                        //ptodata/2/pna/US6007_COMB.seq
//ptodata/2/pna/US6008_COMB.seq
//ptodata/2/pna/US6009_COMB.seq
                                                                                                                                                     /ptodata/2/pna/US6002_COMB.seq
/ptodata/2/pna/US6003_COMB.seq
/ptodata/2/pna/US6004_COMB.seq
/ptodata/2/pna/US6005_COMB.seq
/ptodata/2/pna/US6005_COMB.seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /ptodata/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /ptodata/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ptodata/2/
                                                                                                                                                                                                                                                                                                                            ptodata/2/pna/US095C_COMB.seq
ptodata/2/pna/US096A_COMB.seq
ptodata/2/pna/US096B_COMB.seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /ptodata/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /ptodata/2/pna/US09
                                                                                                                                                                                                                                                                                                                                                                                                  ptodata/
                                                                                                                                                                                                                                                               pna/US6000_COMB.seq:*
pna/US6001_COMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5_COMB.seq:*
86_COMB.seq:*
87_COMB.seq:*
88_COMB.seq:*
88_COMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (without alignments)
1473.291 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMB.seq:
                                                                                                                                                                                                                                                                                                                                                                                              5B_COMB.seq
                                                                                                                                                                                                                                                                                                          COMB. seq:
                                                                                                                                                                                                                                                                                                                                                                                                                                           COMB.seq:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24740816
```

```
44: /cgn2_6/ptodata/2/pna/US6019_COMB.seq:*
45: /cgn2_6/ptodata/2/pna/US6020_COMB.seq:*
46: /cgn2_6/ptodata/2/pna/US6020_COMB.seq:*
47: /cgn2_6/ptodata/2/pna/US6022_COMB.seq:*
48: /cgn2_6/ptodata/2/pna/US6023_COMB.seq:*
49: /cgn2_6/ptodata/2/pna/US6024_COMB.seq:*
50: /cgn2_6/ptodata/2/pna/US6024_COMB.seq:*
51: /cgn2_6/ptodata/2/pna/PCT_NEW_COMB.seq:*
52: /cgn2_6/ptodata/2/pna/US6_NEW_COMB.seq:*
53: /cgn2_6/ptodata/2/pna/US08_NEW_COMB.seq:*
54: /cgn2_6/ptodata/2/pna/US08_NEW_COMB.seq:*
55:: /cgn2_6/ptodata/2/pna/US08_NEW_COMB.seq:*
55:: /cgn2_6/ptodata/2/pna/US08_NEW_COMB.seq:*
56: /cgn2_6/ptodata/2/pna/US08_NEW_COMB.seq:*
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

									,						٠																													
2) ×		. 4	4	4	. 4	 س`		ω	ω	ω	ω	ω			w	2	N	ผ	2	2	2	2	2	ဂ 2	2	_	_	_	_	_	<b>–</b>	<u>, , , , , , , , , , , , , , , , , , , </u>	<b>,</b>	, د										Result
տ	4	ω	2	٠,		9	œ	7	σ	u	4	ω	N	ш	0	9	œ	7	σ	u	4	w	N	ш	0	9	œ	7	σ.	u	4	w	N	_ (	<b>.</b>	0 0	`	10	· UT	4	ω	2	1	
4	- 349	4	. 349	49.	52.	56.	58	58.	61.	61.	61.	61.	61.	61.	ŗ	61.	69.	392	9		2	5	09.	$\tilde{\mathbf{L}}$		5	25.	5	26.	26	ა 6	3	œ	٠,	٠ ر د		04.	50	Ö			7	N	Score
47.3	47.9	47.9	47.9	47.3	48.3	48.9	49.1	49.1	9.	9.	9.	49.6	9	9.	49.5	9.	50.7	ω	ω	55.2	55.2	5	σ.	57.3	57.3	58.3	8	ω.	8	58.5	9	0		60	υ <b>(</b>	, o	٠.	69.3	ω.	8	φ,	98.5	100.0	Query
741	741	738	.738	1668	720	1725	78	7	7	7	7	7	7	772	772	772	783	1086	1047	792	786	879	830	726	726	1679	1679	1679	792	753	720	714	828	819	7/1	7/7	919	1135	1611	749	768	768	729	Length
7	7	7	7	18	16	18	19	19	16	11	7	7	7	7	7	7	21	22	22	ᆫ	۳	16	17	16	16	55	19	17	Н	<b></b> -	21	21	ភ ភ	л ( л (	л F Л C	ם מ	י טו	16	13	13	13	13	16	Bd
-08-331-396A	US-08-331-396-31	08-331-396D-	-08-331-39	09-468-029-5	09-296-595-7	09-468-029-	09-526-738-	09-526-738-	09-227-693-	S-08-759-804-3	331-398-3	331-	-08-331-396D-3	-08-331-396C-	-08-331-396A-3	-08-331-396-3	09-589-870-	09-646-028-3	09-646-028-	T-US00-19843-1	-US00-19843-1	-09-235-073-2	S-09-358-321A-	09-202-000-1	09-202-00	09-188-082-1	-09-523-279-1	09-364-088-1	US00-19843-9	-US00-19	-09-559-019-2	-09-559-019-30	-09-523-095A-	09-523-095A-2	-09-833-0984-3	07-191-3	-09-523-095A-3	-09-203-958-2	-08-983-035-3	-08-983-035-	-08-930-480A-	6	US-09-297-181-1	ID
e 31,	equence: 31,	31,	31, 7	59,	27, 2	57,	е 3,	1,	33,	се 33, Ар	equence 33,	equence 33,	Ü	33,	33,	33, App	36,	37,	e 35,	10,	quence 17, A	22,	31,	15,	equence 13,	15,	15, Ap	Sequence 15, Ap	equence	quence 16, F	equence 2	30,	equence 25,	Sequence 29, Appl	ب د م	sequence 31, Appr	ر د د	2,2	37	46,	e 4,	e 4, App	en	Description

ALIGNMENTS

```
; TYPE: DNA
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(729)
US-09-297-181-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/297,181
CURRENT FILING DATE: 1999-04-26
EARLIER APPLICATION NUMBER: PCT/FR97/01921
EARLIER FILING DATE: 1997-10-27
EARLIER APPLICATION NUMBER: FR96/13176
EARLIER FILING DATE: 1996-10-29
NUMBER OF SEQ ID NOS: 4
SOFTWARE: PATENTIN Ver. 2.0
SEQ ID NO 1
SEQ ID NO 1
                       ρy
                                                                                        δõ
                                                                                                                                                                                                                    Ş
뮍
                                                            B
                                                                                                                           В
                                                                                                                                                        δÃ
                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                    QΥ
                                                                                                                                                                                                                                                                                                                     멇
                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Sim
Matches 729;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 1, Application US/09297181 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: ANTI-P53 SINGLE-CHAIN ANTIBODY FRAGMENTS AND THEIR USES FILE REFERENCE: ST96030-US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Bracco, La APPLICANT: Debussche,
                    ,
109
                                                                                                                                                                                                                        421
                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 caggtgcagctgcagcagtctggggcagagcttgtgaggtcaggggcctcagtcaagttg
          agtggatcagggacagatttcacactgaaaatcaacagagtggaggctgaggatttggga 660
                                                                                                                                                                                                          actttgtcggttaccattggacaaccagcctccatctcttgcaagtcaagtcagagcctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ttggatagtgatggaaagacatatttgaattggttgttacagaggccaggccagtctcca
                                                                                                                                                                                                                                                                      tcaggcggaggtggctctggcggttggcggatcggatgttttgatgacccaaactccactc
                                                                                                                                                                                                                                                                                                                                                                                                      cctgaacagggcctggagtggattggattgatcctgaggaatggtgatactgaatat 180
                                                          aagcgcctaatctatctggtgtctaaactggactctggagtccctgacaggttcactggc
                                                                                                                        ttggatagtgatggaaagacatatttgaattggttgttacagaggccaggccagtctcca
                                                                                                                                                                                         actttgtcggttaccattggacaaccagcctccatctttgcaagtcaagtcagagcctc
                                                                                                                                                                                                                                                       tcaggcggaggtggctctggcggtggcggatcggatgttttgatgacccaaactccactc
                                                                                                                                                                                                                                                                                                                     gatgctttggactattggggccaagggaccacggtcaccgtctcctcaggtggaggcggt
                                                                                                                                                                                                                                                                                                                                      gatgctttggactattggggccaagggaccacggtcaccgtctcctcaggtggaggcggt
                                                                                                                                                                                                                                                                                                                                                                                   ctgcagctcagcagcctggcatctgaggacactgccgtctattattgtaatttttacggg 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cctgaacagggcctggagtggattggattgatcctgagaatggtgatactgaatat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             caggtgcagctgcagcagtctggggcagagcttgtgaggtcaggggcctcagtcaagttg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Laurent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 729; DB 16;
Pred. No. 1.8e-207;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                          600
                                                                                                                          540
                                                                                                                                                        540
                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                                                       360
                                                                                                                                                                                                                                                                                                                                                       360
                                                                                                                                                                                        480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
, vo
                                                          밁
                          δÃ
                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                         ; MOLECULE TYPE: US-08-930-480-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-930-480-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
                                                                                                                                                                               Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 4, Applicat
GENERAL INFORMATION
                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: (610) 454-3808 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NÚMBER: WO PCT/FI
FILING DATE: .29-MAR-1996
ATTORNEY/AGENT INFORMATION:
NAME: Fehlner Esq., Paul F.
REGISTRATION NUMBER: 35,135
REFERENCE/DOCKET NUMBER: ST9-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (610) 454-3839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR 9
FILING DATE: '31-MAR-1995
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STREET: DOU COLLEGEVILLE CITY: Collegeville STATE: PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: CONDITIONAL EXPRESSION SYSTEM NUMBER OF SEQUENCES: 29
CORRESPONDENCE ADDRESS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: BRACCO,
APPLICANT: SCHWEIGI
APPLICANT: TOCQUE,
                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
 148
                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          721
                                                       STRANDEDNESS: double TOPOLOGY: linear
                                                                                                                    28
                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ZIP: 19426
                                                                                                                                                                                                                                                                                                                                   LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: Rhone-Poulenc Rorer Inc. STREET: 500 Arcola Road, Mailstop 3C43
                                                                                                                                    1 caggtgcagctgcagcagtctggggcagagcttgtgaggtcagggggcctcagtcaagttg
              cctgaacagggcctggagtggattggattggattgattcctgagaattggtgatactgaatat 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gaaatcaaa 729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gtttattattyctggcaaggtacacattctccgctcacgttcggtgctggcaccaagctg
                                                                                                                      CAGGTGCAGCTGCAGCCAGTCTGGGGGCAGAGCTTGTAAGGTCAGGGGGCCTCAGTCAAGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gaaatcaaa 729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gtttattattijctggcaaggtacacattctccgctcacgttcggtgctggcaccaagctg
                                                                                                                                                                               11 Similarity
722; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Application US/08930480
                                                                                                                                                                                                                                                                                                                                 768 base pairs
                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOCQUE, Bruno
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SCHWEIGHOFFER, Fabier
                                                                                                                                                                                                                                                                                                                  leic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Floppy disk
                                                                                                                                                                                             98.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US/08/930,480
                                                                                                                                                                                                                                                                                                                                                                                                                                     Paul F.
35,135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FR 95/03841
                                                                                                                                                                                                                                                                                                                                                                    4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PCT/FR96/00477
                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                           ST95021-US
                                                                                                                                                                                             Score 717.8;
Pred. No. 4.
                                                                                                                                                                                Mismatches
                                                                                                                                                                               1.2e-204;
nes 7;
                                                                                                                                                                                                             DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #
                                                                                                                                                                                Indels
                                                                                                                                                                                0;
                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         720
                                                                                                                      87
                                                                                                                                                  60
207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       720
                                                                                                                                                                                0
```

```
APPLICANT: TOCQUE, Bruno
TITLE OF INVENTION: CONDITIONAL EXPRESSION S
FILE REFERENCE: ST95021-US
CURRENT APPLICATION NUMBER: US/08/930,480A
CURRENT FILING DATE: 1998-01-21
PRIOR APPLICATION NUMBER: PCT/FR96/00477
PRIOR FILING DATE: 1996-03-29
PRIOR APPLICATION NUMBER: FR95/03841
PRIOR FILING DATE: 1995-03-31
NUMBER OF SEO ID NOS: 32
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 4
LENGTH: 768
CRGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                       ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
Query Match
Best Local Similarity
Matches 722; Conserv
                                                                                                                                                                                                                                                                                              Sequence 4, Application US/08930480A
GENERAL INFORMATION:
APPLICANT: BRACCO, Laurent
APPLICANT: SCHWEIGHOFFER, Fabien
                                                          FEATURE:
OTHER INFORMATION: Description
OTHER INFORMATION: p53
-08-930-480A-4
                                                                                                                                                                                                                                                                                                                                                 -08-930-480A-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    448
                                                                                                                                                                                                                                                                                                                                                                                                    748
                                                                                                                                                                                                                                                                                                                                                                                                                        721
                                                                                                                                                                                                                                                                                                                                                                                                                                                   889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     268
                                                                                                                                                                                                                                                                                                                                                                                                1 gaaatcaaa 729
||||| |||
8 GAAATTAAA 756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ctgcagctcagcagcctggcatctgaggacactgccgtctattattgtaatttttacggg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   agtggatcagggacagatttcacactgaaaatcaaccagagtggaggctgaggatttggga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTGGATAGTGATGGAAAAACATATTTGAATTGGTTGTTACAGAGGCCAGGCCAGTCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ttggatagtgatggaaagacatatttgaattggttgttacagaggccaggccagtctcca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACTTTGTCGGTTACCATTGGACAACCAGCCTCCATCTCTTGCAAGTCAAGTCAGAGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 actttgtcggttaccattggacaaccagcctccatctcttgcaagtcaagtcagagcctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGTTTTTGATGACCCCAAACTCCACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tcaggcggaggtggctctggcggtggcggatcggatgttttgatgacccaaactccactc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGTGGATCAGGGACAGATTTCACACTTAAAATCAACAGAGTGGAGGCTGAGGATTTGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGAGTCCCTGACAGGTTCACTGGC
 Conservative
                                                                                                                                                                                                                                                                        CONDITIONAL EXPRESSION
            98.5%;
  0
Score 717.8; DB 13
Pred. No. 4.2e-204;
0; Mismatches 7;
                                                                                     of.
                                                                                   Artificial
                                                                                                                                                                                                                                                                         SYSTEM
                        DB 13;
                                                                                  Sequence:
 Indels
                        Length
                                                                                     ScFv
                         768;
0
 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   387
 0
```

```
RESULT 4
US-08-983-035-46.
Sequence 46, Application US/08983035
Sequence 46, Application US/08983035
GENERAL INFORMATION:
APPLICANT: CONSEILLER, Emmanuel
APPLICANT: BRACCO, Laurent
ITILE OF INVENTION: P53 PROTEIN VAN
TITLE OF INVENTION: USES THEREOF
NUMBER OF SEQUENCES: 59
CORRESPONDENCE ADDRESS:
ADDRESSEE: Rhone-Poulenc Rorer In
SADDRESSEE: Rhone-Poulenc Rorer In
                                                                                                                                                                                                                                                                                                                                     Db·
                                                                                                                                                                                                                                                                                                              20
                                                                                                                                                                                                                                                                                                                                                         ğ
                                                                                                                                                                                                                                                                                                                                                                                                    ΩÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                           멂
                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
COUNTRY: USAS
ZIP: 19426
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy di
COMPUTER: IBM PC compo
OPERATING SYSTEM: PC-1
                                                                                                                                                                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                                                                                                                                                 568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  886
                                                                                                                                                                                                                                                       721 gaaatcaaa
|||||| |||
                                                                                                                                                                                                                                                                                           889
                                                                                                                                                                                                                                                                                                                                      628
                                                                                                                                                                                                                                                                                                                                                                                                                           508
                                                                                                                                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              148
                                                                                                                                                                                                                                               748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                 ADDRESSEE: Rhone-Poulenc
STREET: 500 Arcola Road,
CITY: Collegeville
STATE: PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28
                                                                                                                                                                                                                                                                                                                                                agtggatcagggacagatttcacactgaaaatcaacagagtggaggctgaggatttggga
                                                                                                                                                                                                                                                                                                                                                                             ttggatagtgatggaaagacatatttgaattggttgttacagagggccaggccagtctcca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    caggtgcagctgcagcagtctggggcagagcttgtgaggtcaggggcctcagtcaagttg
                                                                                                                                                                                                                                                                                                                             agtggatcagggacagaittcacacttaaaatcaacagagtggaggctgaggatttggga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gcóccgaagtteccagggcaaggccactatgactgcagacacatcctccaatacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gaaattaaa
                                                                                                                                                                                                                                                                                                                                                                                                                           ttggatagtgatggaaaaacatatttgaattggttgttacagaggccaggccagtctcca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tcaggcggaggtggctctggcggtggcggatcggatgttttgatgacccaaactccactc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tcaggcggaggtggctctggcggtggcggatcggatgttttgatgacccaaactccactc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    caggtgcagctgcagcagtctggggcagagcttgtaaggtcaggggcctcagtcaagttg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg
                                                                                                                                                                                                                                                                 . 729
   PC-DOS/MS-DOS
                                                                                       Rorer Inc.
Mailstop 3C43
                                                                                                                                              VARIANTS
                                                                                                                                              AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                                          660
                                                                                                                                                                                                                                                                                                                                                                                627
                                                                                                                                                                                                                                                                                                                                                                                                      600
                                                                                                                                                                                                                                                                                                                                                                                                                           567
                                                                                                                                                                                                                                                                                                                                                                                                                                               540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     87
```

```
Query Match
Best Local Similarity yo...
721; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:

PRIOR APPLICATION DATA:

APPLICATION NUMBER: WO FR96/01111

FILLING DATE: 17-JUL-1996

ATTORNEY/AGENT INFORMATION:

NAME: SAVILTAY ESQ. MARTHIN F.

REGISTRATION NUMBER: 29,699

REFERENCE/DOCKET NUMBER: ST95044-US

TELEPHONE: (610) 454-3816

TELEPHONE: (610) 454-3816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEFAX: (610) 454-3808
INFORMATION FOR SEQ ID NO: 4
SEQUENCE CHARACTERISTICS:
LENGTH: 749 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
                                                                                                                                                                                                                 430
                                                                                                                                                                                                                                                                                                 370
                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
      601
                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241 ctgcagctcagcagcctggcatctgaggacactgccgtctattattgtaatttttacggg 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    70 TCCTGCACAGCTTCTGGCTTCAACATTAAAGACTACTATATGCACTGGGTGAAGCAGAGG 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: FR 9 FILING DATE: 19-JUL-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                    tcaggcggaggtggctctggcggtggcggatcggatgttttgatgacccaaactccactc 420
                                                                                                                                                                                                                                                                                                                                                                                                  gatgctttggactattggggccaagggaccacggtcaccgtctcctcaggtggaggcggt 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctac 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cctgaacagggcctggagtggattggattggattgattcctgagaatggtgatactgaatat 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         àgtggatcagggacagatttcacactgaaaatcaacagagtggaggctgaggatttggga 660
                                                                     TTGGATAGTGATGGAAAGACATATTTGAATTGGTTGTTACAGAGGCCAGGCCAGTCTCCA
                                                                                                                                                                                                                                    actttgtcggttaccattggacaaccagcctccatctcttgcaagtcaagtcagagcctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCTGAACAGGGCCTGGAGTGGATTGGATTGATCCTGAGAATGGTGATACTGAATAT 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGGTGCAGCTGCAGGAGTCAGGGGGCAGAGCTTGTGGGGGTCAGGGGCCTCAGTCAAGTTG 69
                                                                                                                                                    ttggatagtgatggaaagacatatttgaatttgttatgttacagaggccaggccagtctcca<sup>5</sup> 540
                                                                                                                                                                                                               ACTTTGTCGGTTACCATTGGACAACCAGCCTCCATCTCTTGCAAGTCAAGTCAGAGCCTC 489
                                                                                                                                                                                                                                                                                                 TCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGATGTTTTGATGACCCCAAACTCCACTC
                                                                                                                                                                                                                                                                                                                                                                                GATGCTTTGGACTACTGGGGCCAAGGGACCACGGTCACCGTCTCAGGTGGAGGCGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGCAGCTCAGCAGCCTGGCATCTGAGGACACTGCCGTCTATTATTGTAATTTTTACGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCCCGAAGTTCCAGGGCAAGGCCACTATGACTGCAGACACATCCTCCAATACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98.2%;
98.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FR 95/08729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US/08/983,035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 716.2;
Pred. No. 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .3e-203;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 749; •
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                               549
                                               609
                                                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                                                                              429
                                                                                                                                                                                                                                                                                                                                                                                369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  249
```

0

P 04 B

Ş

B 65 B 65 B

0;

```
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          멍
                                                                                                           Duery Match
Best Local S
Matches 721
                                                                                                                                                                                           us-08-983-035-37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-983-035-37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 37, Application US/08983035 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: WO FR96/0111
FILING DATE: 17-JUL-1996
ATTORNEY/AGENT INFORMATION:
NAME: SAVITZKY.ESG., MARTIN F.
REGISTRATION NUMBER: 29,699
REFERENCE/DOCKET NUMBER: ST95044
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                  TELEFAX: (610) 454-3808 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
LENGTH: 1611 base pair
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: FR 95/08729 FILING DATE: 19-JUL-1995 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: CONSEILLER, Emm APPLICANT: BRACCO, Laurent
                                                                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: P53 PROTEIN TITLE OF INVENTION: USES THEREOF
                                                                                                                                                                                                                                                     MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Relace
                                                                                                                                                                                                         NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: FILING DATE: CLASSIFICATION: 435
61 tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY: USA
ZIP: 19426 (
                                                                                                                                                                                                                                                                                    STRANDEDNESS:
                                                                                                                                                                                                                                                                                                 TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                               TELEPHONE:
                                                                                                                                                                                                                                                                       TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
                                                                          1 caggtgcagctgcagcagtctggggcagagcttgtgaggtcaggggcctcagtcaagttg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGCTGAAA .738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gaaatcaaa 729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gtttattattgctggcaaggtacacattctccgctcacgttcggtgctggcaccaagctg
                                                CAGGTGCAGCTGCAGGAGTCAGGGGCAGAGCTTGTGGGGGTCAGGGGGCCTCAGTCAAGTTG
                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Collegeville
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PA'
                                                                                                                                                                                                                                                                                                                  1611 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           500 Arcola Road, Mailstop
                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CONSEILLER, Emmanuel
                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                   (610)
                                                                                                                                                                                                                                                                                    single
                                                                                                                                                                                                                                                                                                                                                                                 454-3816
                                                                                                                           98.2%;
98.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P53 PROTEIN VARIANTS AND THERAPEUTICAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO FR96/01111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US/08/983, 035
                                                                                                           Score 716.2;
Pred. No. 1.8e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3C43
                                                                                                           1.8e-203;
ches 8;
                                                                                                                                          DB 13;
                                                                                                              Indels
                                                                                                                                            Length
                                                                                                                                             1611;
                                                                                                              0;
                                                                                                             Gaps
                                                66
                                                                              60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             669
```

```
Sequence 2, Application:
Sequence 2, Application:
GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL INFORMATION:
FILLE OF INVENTION: CELLS EXPRESSING ANTI-FC REC
FILE REFERENCE: MXI-099
CURRENT APPLICATION NUMBER: US/09/203,958
CURRENT FILING DATE: 1998-12-02
EARLIER APPLICATION NUMBER: 60/067,232
EARLIER FILING DATE: 1997-12-02
WIMBER OF SEQ ID NOS: 2
WIMBER OF SEQ ID NOS: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                         RESULT 6
US-09-203-958-2
                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                    NUMBER OF SEQ ID NO:
SOFTWARE: PATENTIN '
SEQ ID NO 2
LENGTH: 1135
TYPE: DNA
Query Match
Best Local Similarity
Matches 608; Conserv
                                                             NAME/KEY: CDS
LOCATION: (74)..(1132)
-09-203-958-2
                                                                                               ORGANISM: synthetic FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                                               721
                                                                                                                                                                                                                                                                                                                                                                                       667
                                                                                                                                                                                                                                                                                                                                                                                                               661
                                                                                                                                                                                                                                                                                                                                                                                                                                      607
                                                                                                                                                                                                                                                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                          727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ttggatagtgatggaaagacatatttgaattggttgttacagaggccaggccagtctcca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               actttgtcggttaccattggacaaccagcctccatctcttgcaagtcaagtcagagcctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ctgcagctcagcagcctggcatctgaggacactgccgtctattattgtaatttttacggg
                                                                                                                                                                                                                                                                                                                                          GAGCTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gatgctttggactattggggccaagggaccacggtcaccgtctcctcaggtggaggcggt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGCAGCTCAGCAGCCTGGCATCTGAGGACACTGCCGTCTATTATTGTAATTTTTACGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCTGCACAGCTTCTGGCTTCAACATTAAAGACTACTATATGCACTGGGTGAAGCAGAGG
                                                                                                                                                                                                                                                                                                                                                              gaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTGGATAGTGATGGAAAGACATATTTGAATTGGTTGTTACAGAGGCCAGGCCAGTCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACTTTGTCGGTTACCATTGGACAACCAGCCTCCATCTCTTGCAAGTCAAGTCAGAGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCAGGCGGAGGTGGCTGGCGGTGGCGGATCGGATGTTTTGATGACCCAAACTCCACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GATGCTTTGGACTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGCGGT
  Conservative
                                                                                                                                                                                                                                                                                                                                                               729
                                                                                                          construct
             69.3%;
81.2%;
  0;
 Score 505; DB 16;
Pred. No. 3.1e-140;
0; Mismatches 120;
                                                                                                                                                                                                                                            RECEPTOR
                         Length 1135;
  Indels
                                                                                                                                                                                                                                           BINDING
21;
                                                                                                                                                                                                                                            COMPONENTS
  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                               720
                                                                                                                                                                                                                                                                                                                                                                                                                                        666
                                                                                                                                                                                                                                                                                                                                                                                                                                                              660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             126
```

```
RESULT /
US-09-523-095A-33
                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                           20
                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                       멂
                                                                                                                                                                                                                                                                                                                                                                                                                                               ΩV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QY
                                                                                                                                                                                                                                                                   밓
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
SOFTWARE: Pat
SEQ ID NO 33
LENGTH: 819.
TYPE: DNA
                                                               APPLICANT: FUKUSHIMA, NGUSHIMA PPLICANT: UNO, Shinsuke
APPLICANT: OH-EDA, Masayoshi
APPLICANT: KIKUCHI, Yasufumi
TITLE OF INVENTION: APOPTOSIS-INDUCING SINGLE-CHAIN
FILE REFERENCE: 065678/0102
CURRENT APPLICATION NUMBER: US/09/523,095A
CURRENT FILING DATE: 2000-03-10
CURRENT FILING DATE: JP 11-63557
                                                                                                                                                                                         Sequence 33, Application US/09523095A GENERAL INFORMATION:
                                                PRIOR APPLICATION'NUMBER: JP:
PRIOR FILING DATE: 1999-03-10
NUMBER OF SEQ ID NOS: 40
                                                                                                                                                                                                                                                                    906
                                                                                                                                                                                                                                                                                            701
                                                                                                                                                                                                                                                                                                                     846
                                                                                                                                                                                                                                                                                                                                       641
                                                                                                                                                                                                                                                                                                                                                                       786
                                                                                                                                                                                                                                                                                                                                                                                581 tocotgacaggttcactggcagtggatcagggacaggatttcacactgaaaatcaacagag
                                                                                                                                                                                                                                                                                                                                                                                                                       726
                                                                                                                                                                                                                                                                                                                                                                                                                                                  521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N
                                                                                                                                                                                                                                                                                                                  agaggccaggccagtctccaaagcgcctaatctatctggtgtctaaactggactctggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gcaagtcaagtcagagcctcttggatagtgatggaaagacatatttgaattggttgttac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tctcctcaggtggaaggcggttcaggcggaggtggctctggcggtggcggatcggatgttt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ctgaacagggcctggagtggattggatggattgatcctgagaatggtgatactgaatatg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagaggc 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tcggtgctggcaccaagctggaaatcaaa 729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tgatgacccaaactccactcactttgtcggfttaccattggacaaccagcctccatctctt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          attactacggtagtagctacgaggcgtttccttactggggccaagggactctggtcactg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -------..atttttacggggatgctttggactattggggccaagggaccacggtcaccg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tgcagctcaacagtctgacatctgaggactctgcagtctattactgtgtaagaggagttt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tgcagctcagcagcctggcatctgaggacactgccgtctattattgt---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                atggaaagagccttgagtggactggaaataataatccttactatggtagtactagctaca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cctgcaaggcttctggttattcattcactgactacatcatattttgggtgaagcagagcc
                                                                                                                                                                                                                                                                   tcggtggaggcaccaagctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                     tccctgacaggttcactggcagtggatcagggacagatttcacactgaaaatcagcagag
                                                                                                                                                                                                                                                                                                                                                                                                                       agaggccaggccagtctccaacgcgcctaatctatctggtgtctaaactggactctggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gcaagtcaagtcagagcctcttagatagtgatggaaagacatatttgaattggttgttac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tgatgacccagactccactctgtcgattaccattggacaaccagcctccatctctt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PatentIn
                                        Ver.
                                        2.1
                                                                                                                                                                                                                                                                    934
                                                                                                                              Ŧ٧
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 425
                                                                                                                                                                                                                                                                                                                                                                       845
                                                                                                                                                                                                                                                                                                                                                                                              640
                                                                                                                                                                                                                                                                                                                                                                                                                       785
                                                                                                                                                                                                                                                                                                                                                                                                                                                  580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                      905
                                                                                                                                                                                                                                                                                                                                               700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        288
```

ORGANISM: FEATURE:

Mus

sp.

```
RESULT 8
US-09-523-095A-31
US-09-523-095A-31
Sequence 31, Application US/09523095A
GENERAL INFORMATION:
APPLICANT: FUKUSHIMA, Naoshi
APPLICANT: UNO, Shinsuke
APPLICANT: OH-EDA, Masayoshi
APPLICANT: KIKUCHI, Yasufumi
TITLE OF INVENTION: APOPTOSIS-INDUCI
                                                                                                                                                                                         Š
                                                                                                                                                                                                                                            Q
                                                                                                                                                                                                                                                                                           γQ
                                                                                                                                                                                                                                                                                                                       망
                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          us.
                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 63.8%;
Best Local Similarity 78.1%;
Matches 572; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: CDS
LOCATION: (1)..(813)
-09-523-095A-33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       118
                                                                                                                                                                    778
                                                                                                                                                                                          718
                                                                                                                                                                                                                    718
                                                                                                                                                                                                                                                                        658
                                                                                                                                                                                                                                                                                                598
                                                                                                                                                                                                                                                                                                                         598
                                                                                                                                                                                                                                                                                                                                                   538
                                                                                                                                                                                                                                                                                                                                                                            538
                                                                                                                                                                                                                                                                                                                                                                                                    478
                                                                                                                                                                                                                                                                                                                                                                                                                             478
                                                                                                                                                                                                                                                                                                                                                                                                                                                    418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          58
                                                                                                                                                                              ctggaaatcaaa 729
                                                                                                                                                                                                                                                                                                                                                                                                                         ctcactttgtcggttaccattggacaaccagcctccatctcttgcaagtcaagtcagagc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            caggtgcagctgcagcagtctggggcagagcttgtgaggtcaggggcctcagtcaagttg
                                                                                                                                                                                                                                 ggagtttattattgctggcaaggtacacattctccgctcacgttcggtgctggcaccaag
                                                                                                                                                                                                                                                                                     ccaaagcgcctaatctatctggtgtctaaactggactctggagtccctgacaggttcact
                                                                                                                                                                                                                                                                                                                                                                                       ctcttggatagtgatggaaagacatatttgaattggttgttacagaggccaggccagtct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           --ggatgctttggactattggggccaagggaccacggtcaccgtctcctcaggtggaggc--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                atggacctcagcagcctggcctctgaggactctgcggtctattactgtgcaagagggggt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              aatgagaagttcaaggacaaggccactctgacttcagacaaatcctccaccacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ccagggcagggccttgagtggattggatatatttatccttacaatgatggtactaagtat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cctgaacagggcctggagtggattggattgatcctgagaatggtgatactgaatat 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg
                                                                                                                                                                    ctggaaataaaa
                                                                                                                                                                                                                    ggagtttatttctgctctcaaagtacacatgttccgtacacgttcggaggggggaccaag
                                                                                                                                                                                                                                                                       ggcagtggatcagtgacagatttcacactcatgatcagcagagtggaggctgaggatctg
                                                                                                                                                                                                                                                                                                                       ccaaaactcctgatctacaaagtttccaaccgattttctggggtcccagacaggttcagt
                                                                                                                                                                                                                                                                                                                                                                         cttgtgcacagtaatggaaagacctatttacattggtacctgcagaagccaggccagtct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tactatacttacgacgactggggccaaggcaccactctcacagtctcctcaggtggtggt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tcctgcaaggcttctggatacaccttcgctaaccatgttattcactgggtgaagcagaag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          caggtccagctgcagtctggacctgaactggtaaagcctggggcttcagtgaagatg
                         Yasufumi
APOPTOSIS-INDUCING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 464.8; DB Pred. No. 3e-128; D; Mismatches 15
                          SINGLE-CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   55;
                          ۴v
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          117
                                                                                                                                                                                                                                                                                                                                                                                           537
                                                                                                                                                                                                                                                                                                                                                                                                                             537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                                                657
                                                                                                                                                                                                                                                                                                                         657
                                                                                                                                                                                                                                                                                                                                                 597
                                                                                                                                                                                                                                                                                                                                                                         597
                                                                                                                                                                                                                                                                                                                                                                                                                                                    477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1;
```

```
FILE REFERENCE: 065678/0102
CURRENT APPLICATION NUMBER: US/09/5
CURRENT FILING DATE: 2000-03-10
PRIOR APPLICATION NUMBER: JP 11-6
PRIOR FILING DATE: 1999-03-10
NUMBER OF SEO ID NOS: 40
SOFTWARE: Patentín Ver. 2.1
SEQ ID NO 31
LENGTH: 828
TARGINISM: MUS SP.
ORGANISM: MUS SP.
                            , Ò
                                                                                                                                                                      δ.
                                                               Ş
                                                                                           밁
                                                                                                                   Š
                                                                                                                                             맑
                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                           80
                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; FEATURE: ; NAME/KEY: CDS ; LOCATION: (1)..(822) US-09-523-095A-31
                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                           멍
                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 63.8%;
Best Local Similarity 78.1%;
Matches 572; Conservative
                                      727
                                                               658
                                                                                          667
                                                                                                                     598
                                                                                                                                             607
                                                                                                                                                                       538
                                                                                                                                                                                                 547
                                                                                                                                                                                                                           478
                                                                                                                                                                                                                                                     487
                                                                                                                                                                                                                                                                               418
                                                                                                                                                                                                                                                                                                         427
                                                                                                                                                                                                                                                                                                                                 358
                                                                                                                                                                                                                                                                                                                                                           367
                                                                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                                               307
                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        127
             718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           67
ctggaaatcasa 729
                                                                                                                                                                                                                                                  caggtgcagc:gcagcagtctggggcagagcttgtgaggtcaggggcctcagtcaagttg
                                                     ggagtttattattgctggcaaggtacacattctccgctcacgttcggtgctggcaccaag
                                                                                                      ggcagtggatcagggacagatttcacactgaaaatcaacagagtggaggctgagggatttg
                                                                                                                                                         ccaaagcgcctaatctatctggtgtctaaactggactctggagtccctgacaggttcact
                                                                                                                                                                                                               ctcttggatagtgatggaaagacatatttgaattggttgttacagagggccaggccagtct
                                                                                                                                                                                                                                                                                                                    --ggatgctttggactattggggccaagggaccacggtcaccgtctcctcaggtggaggc
                                                                                                                                                                                                                                                                                                                                                                                                             atggacctcagccagcctggcctctgaggactctgcggtctattactgtgcaagagggggt
                                                                                                                                                                                                                                                                                                                                                                                                                           ctgcagctcagcatgcatctgaggacactgccgtctattattgtaatttttacgg-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cctgaacagggcctggagtggattggatggatgatcctgagaatggtgatactgaatat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg
                                     ggagtttatttctgctctcaaagtacacatgttccgtacacgttcggagggggggaccaag
                                                                                          ggcagtggatcagtgacagatticacactcatgatcagcagagtggaggctgaggatctg
                                                                                                                                             ccaaaactcctgatctacaaagtttccaaccgattttctggggtcccagacaggttcagt
                                                                                                                                                                                                 cttgtgcacagtaatggaaagacctatttacattggtacctgcagaagccaggccagtct
                                                                                                                                                                                                                                                                                                      ggttcgggtggtggttcgggttggtggcggatcggatgttgtgatgacccaaagtcca
                                                                                                                                                                                                                                                                                                                                                           tactatacttacgacgactggggccaaggcaccactctcacagtctcctcaggtggtggt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                aatgagaagttcaaggacaaggccactctgacttcagacaaatcctccaccacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ccagggcagggccttgagtggattggatatatttatccttacaatgatggtactaagtat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tcctgcaaggcttctggatacaccttcgctaaccatgttattcactgggtgaagcagaag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US/09/523,095A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 464.8; DB 55;
Pred. No. 3e-128;
0; Mismatches 157;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        55
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           828;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                               417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           125
                                                                717
                                                                                          726
                                                                                                                                             666
                                                                                                                                                                                                                                                                                                         486
                                                                                                                                                                                                                                                                                                                                                             426
                                                                                                                                                                                                                                                                                                                                                                                   357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      246
                                       786
                                                                                                                    657
                                                                                                                                                                       597
                                                                                                                                                                                                  606
                                                                                                                                                                                                                           537
                                                                                                                                                                                                                                                     546
                                                                                                                                                                                                                                                                              477
                                                                                                                                                                                                                                                                                                                                                                                                               366
                                                                                                                                                                                                                                                                                                                                                                                                                                         299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
```

787

ctggaaataaaa

```
В
                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                          γQ
                                                                                                                                                                                                                                                                                                                                Дb
                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                  밁
                                                                                 δõ
                                                                                                                      밁
                                                                                                                                                     Qy
                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; LOCATION: (1)..(747)
US-09-297-181-3
                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 3, Applicat GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: PatentIn Ver. 2.0 SEQ ID NO 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EARLIER APPLICATION NUMBER: PCT/FR97/01921
EARLIER FILING DATE: 1997-10-27
EARLIER APPLICATION NUMBER: FR96/13176
EARLIER FILING DATE: 1996-10-29
NUMBER OF SEQ ID NOS: 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/09/297,181
CURRENT FILING DATE: 1999-04-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Debussche, Laurent TITLE OF INVENTION: ANTI-P53 SINGLE-CHAIN ANTIBODY FRAGMENTS AND THEIR USES FILE REFERENCE: ST96030-US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Bracco, Laurent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Mus musculus FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY: CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 747
                   580
                                                                                                                      481
                                                                                                                                                         463
                                                                                                                                                                                           421
                                                                                                                                                                                                                         403
                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                343
                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                    atgacccaaactccactcacttgtcggttaccattggacaaccagcctccatctcttgt 462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cctgaacagggcctggagtggattggattggattgatcctgagaattggtgatactgaatat 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 caggtgcagctgcagcagtctggggcagagcttgtgaggtcaggggcctcagtcaagttg
gtccctgacaggttcactggcagtggatcagggacagatttcacactgaaaatcaacaga
                                                                    cagaggccaggccagtctccaaagcgcctaatctatctggtgtctaaactggactctgga i579
                                                                                                                                          tcctcaggtggaggcggttcaggcggaggtggctctggcggttggcggatcggatgttttg 402
                                                                                                                                                                                                                                                                                                                              tactatgaatacgacggctatgctttggactactggggccaagggaccacggtcaccgtc
                                                                                                                                                                                                                                                                                                                                                                                                                   ctgcagctcagcatgcatctgaggacactgccgtctattattgtaat------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gccccgaagttccagggcaaggccactatgactgcagacacatcctccaataccagcctac 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               caggtcaagctgcaggagtcaggggcagaacttgtgaggtcaggggcctcagtcaatttg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     594;
                                                  cagaaaccagggcagtctcctaaagtgctgatctactgggcatccactagggaatctgga
                                                                                                                      aaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggcttggtatcag
                                                                                                                                                                                       ctcacccagtctccatcttccctggctgtgtcagcaggagagaggtcgctatgagctgc
                                                                                                                                                                                                                                                          tcctcaggtggaggcggttcaggcggaggtggctctggcggtggcggatcggacattgag 420
                                                                                                                                                                                                                                                                                                                                                                                                 ctgcacctcagcagcctgacatctgaggacacaaccgtctattactgtaatgcagtcatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacacagcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatat.180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Application US/09297181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                              ttttacggggatgctttggactattggggccaagggaccacggtcaccgtc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    63.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 460.8; DB 16;
Pred. No. 4.6e-127;
0; Mismatches 132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 16;
se-127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      747;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ctac 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                      540
                                                                                                                                                                                       480
                                                                                                                                                                                                                                                                                                                                                                342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60
                  639
                                                  600
                                                                                                                                                       519
                                                                                                                                                                                                                                                                                                                                360
                                                                                                                                                                                                                                                                                                                                                                                                                                     291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ω
```

```
ORGANISM: Mus sp:
FEATURE:
NAME/KEY: CDS
I LOCATION: (1)..(735)
US-09-523-095A-39
                                                                                                                                                                                                                                                                         ğ
                                                                                        Ş
                                                                                                                         맑
                                                                                                                                                   QΥ
                                                                                                                                                                                 밁
                                                                                                                                                                                                            Qy.
                                                                                                                                                                                                                                           ď.
                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                  QΥ
                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 10
US-09-523-095A-39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: Pate SEQ ID NO 39 LENGTH: 741 TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 39, GENERAL INFO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILE REFERENCE: 065678/ULU CURRENT APPLICATION NUMBER: US/09/523,095A CURRENT FILING DATE: 2000-03-10 CURRENT FILING DATE: Jp_11,63557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR FILING DATE: 1 NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: KIKUCHI, Yasufumi
TITLE OF INVENTION: APOPTOSIS-INDUCING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                          364
                               418
                                                                                                                         304
                                                                                                                                                   300
                                                                                                                                                                                 244
                                                                                                                                                                                                               241
                                                                                                                                                                                                                                          184 aatgagaagttcaaggacaaggccactctgacttcagacaaatcctccaccacagcctac
                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                       124
                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           661 gtgcaggctgaagacctggcagtttattactgcaagcaa---tcttataatctaccgacg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity hes 569; Conserv
                                                                                                                                                                                                                                                                                                                                                                 64
                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                        ctcactttgtcggttaccattggacaaccagcctccatctcttgcaagtcaagtcagagc 477
                                                                           atggacctcagcagcctggcctctgaggactctgcggtctattactgtgcaagagggggt
                                                                                                                                                                                               ctgcagctcag@agcctgggcatctgaggacactgccgtctattattgtaatttttacgg-
                                                                                                                                                                                                                                                          gccccgaägttccagggcaaggccactatgactgcagacacatcctccaatacagcctac
                                                                                                                                                                                                                                                                                                                    cctgaacagggcctggagtggattggattgatcctgagaatggtgatactgaatat 190
                                                                                                                                                                                                                                                                                                                                                                                            tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ttcggcggggcaccaagctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ttcggtgctggcaccaagctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gtggaggctgaggatttgggagtttattattgctggcaaggtacacattctccgctcacg 699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gtccctgatcgcttcacaggcagtggatctgggacagatttcactctcaccatcagcagt
ctctccctgcctgtcagtcttggagatcaagcctccatctcttgcagatcaagtcagagc
                                                          ggftcgggtggtggttcgggtggtggcggatcggatgttgtgatgacccaaagtcca
                                                                                                                     tactatacttacgacgactggggccaaggcaccactctcacagtctcctcaggtggtggt
                                                                                                                                                                                                                                                                                                    ccagggcagggccttgagtggattggatatatttatccttacaatgatggtactaagtat 183
                                                                                                                                                                                                                                                                                                                                                                tcctgcaaggcttctggatacaccttcgctaaccatgttattcactgggtgaagcagaag
                                                                                                                                       ggatgctttggactattggggccaagggaccacggtcaccgtctcctcaggtggaggc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Patentin Ver.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      UNO, Shinsuke
OH-EDA, Masayoshi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FUKUSHIMA, Naoshi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/09523095A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1999-03-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    63.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 460; DB Pred. No. 8e-1; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SINGLE-CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8e-127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       160;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 741;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                        417
                                                                                                                     363
                                                                                                                                                   357
                                                                                                                                                                                 303
                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       660
                                                           423
                                                                                                                                                                                                             299
                                                                                                                                                                                                                                           243
                                                                                                                                                                                                                                                                                                                                                                 123
```

<u>بــ</u>

```
δÃ
                                                                                            밁
                                                                                                                                                                        Qy
               Ş
                                         В
                                                                                                                   δõ
                                                                                                                                                망
                                                                                                                                                                                                     В
                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                            ; NAME/KEY: CDS
; LOCATION: (1)..(813)
US-09-523-095A-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 11
US-09-523-095A-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뭕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 29, Application US/09523095A
GENERAL INFORMATION:
APPLICANT: FUKUSHIMA, Naoshi
APPLICANT: UNO, Shinsuke
APPLICANT: OH-EDA, Masayoshi
APPLICANT: OH-EDA, Masayoshi
                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQ ID NOS:
SOFTWARE: PatentIn V
SEQ ID NO 29
LENGTH: 819
                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 568; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILE REFERENCE: 065678/0102
CURRENT APPLICATION NUMBER: US/09/523,095A
CURRENT FILING DATE: 2000-03-10
PRIOR APPLICATION NUMBER: JP 11-63557
PRIOR FILING DATE: 1999-03-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: OH-EDA, Masayoshi
APPLICANT: KIKUCHI, Yasufumi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Mus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                      181
                                                                                                                                                                            121
                                                                                                                                                                                                     118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           724
                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                         88
                                                                                                                                                                                                                                                                      ;-ggatgctttggactattggggccaagggaccacggtcaccgtctcctcaggtggaggc 357
                                                     ctgcagctcagcatgcatctgaggacactgccgtctattattgtaatttttacgg-
                                                                                                                                                                                                                 tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              atggagctcagcagcctggcctctgaggactctgcggtctactactgtgcaagaggggt
                                                                                                        gccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctac
                                                                                                                                                              cctgaacagggcctggagtggattggatggattgatcctgagaatggtgatactgaatat 180
                                                                                                                                                                                                     tcctgcaaggcttctggatacaccttcgttaaccatgttatgcactgggtgaagcagaag
                                                                                                                                                                                                                                                     caggtccagctgcagcagtctggacctgacctggtaaagcctggggcttcagtgaagatg 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ctggaaataaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ctggaaatcaaa 729
||||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ccaaagcgcctaatctatctggtgtctaaactggactctggagtccctgacaggttcact
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     aatgagaagttcaagggcaaggccacactgacttcagagaaatcctccagcgcagcctac
                                                                                                                                                ccagggcagggccttgagtggattggatatatttatccttacaatgatggtactaagtac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ggagtttatttctgctctcaaagtacacatgttccgtacacgttcggaggggggaccaag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ggagtttattattgctggcaaggtacacattctccgctcacgttcggtgctggcaccaag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ccaaaactcctgatctacaaagtttccaaccgattttctggggtcccagacaggttcagt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cttgtgcacagtaatggaaagacctatttacattggtacctgcagaagccaggccagtct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PatentIn Ver. 2.1
                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N: APOPTOSIS-INDUCING SINGLE-CHAIN FV 065678/0102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            735
                                                                                                                                                                                                                                                                                                                       62.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 40
                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                           Score 458.4; I Pred. No. 2.5e. 0; Mismatches
                                                                                                                                                                                                                                                                                                         .5e-126;
nes 161;
                                                                                                                                                                                                                                                                                                                                     DB 55;
                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                           ω
                                                                                                                                                                                                                                                                                                           Gaps
                                                                  299
                                                                                                                      240
                                                                                                                                                                                                     177
                                                                                                                                                                                                                                                                                   60
                                                                                            297
                                                                                                                                                  237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        543
                                                                                                                                                                                                                                                                                                           ۲,
                                   γQ,
                                                                  밁
                                                                                           γ̈́
                멼
                                                                                                                      밁
                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        뭕
```

```
RESULT 12
US-09-523-095A-25
                                                                                                                                                                                                                                                                                     US-09-523-095A-25
                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: Par
SEQ ID NO 25
LENGTH: 828
TYPE: DNA
                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 568; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 25, Application US/09523095A GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: OH-EDA, Masayoshi
APPLICANT: KIKUCHI, Yasufumi
TITLE OF INVENTION: APPPTOSIS-INDUCING SINGLE-CHAIN
FILE REFERENCE: 065678/0102
CURRENT APPLICATION NUMBER: US/09/523,095A
CURRENT FILING DAYE: 2000-03-10
CURRENT FILING DAYE: 2000-03-10
                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT ELLANDON NUMBER: JP 1
PRIOR APPLICATION NUMBER: J99-03-10
PRIOR FILING DATE: 1999-03-10
OF CEO ID NOS: 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: FUKUSHIMA, Naoshi
APPLICANT: UNO, Shinsuke
APPLICANT: OH-EDA, Masayoshi
                                                                                                                                                                                                                                                                                                   NAME/KEY: CDS
LOCATION: (1)..(822)
                                                                                                                                                                                                                                                                                                                                   ORGANISM: Mus sp. FEATURE:
   187
                                  Ĭ21
                                                                   127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         778
                                                                                                  61
                                                                                                                               67° caggtccagctgcagcagtctggacctgacctggtaaagcctggggcttcagtgaagatg 126
                 cctgaacagggcctggagtggattggatggattgatcctgaagaatggtgatactgaatat 180
                                                            caggtgcagctgcagcagtctggggcagagcttgtgaggtcagggggcctcagtcaagttg 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ctggaaatcaaa 729
||||||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ggcagtggatcagggacagatttcacactgaaaatcaacagagtggaggctgagggatttg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ctggaaataaaa 789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ggagtttattuttgctggcaaggtacacattctccgctcacgttcggtgctggcaccaag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ccaaagcgcctaatctatctggtgtctaaactggactctggagtccctgacaggttcact
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tactatagttacgacgactggggccaaggcaccactctcacagtctcctcaggtggtggt 417
ccagggcagggccttgagtggattggatatatttatccttacaatgatggtactaagtac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ggagtttatttctgctctcaaagtacacatgttccgtacacgtccggagggggggccaag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ggcagtggatcagggacagatttcacactcaagatcagcagagtggaggctgaggatctg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ccaaagctcctgatctacaaagtttccaaccgattttctggggtcccagacaggttcagt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cttctacacagtaaaggaaacacctatttacaatggtacctacagaagccaggccagtct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ctctccctgcctgtcagtcttggagatcaagcctccatctcttgcagatctagtcagagc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ggttcgggtggtggttcgggtggtggcggatcggatgttgttgatgacccaaactcca
                                                                                                                                                                                                                                                                                                                                                                                                                    PatentIn Ver. 2.1
                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                   62.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JP 11-63557
                                                                                                                                                                                                      0
                                                                                                                                                                                                    Score 458.4; DB
Pred. No. 2.5e-1
0; Mismatches 1
                                                                                                                                                                                          DB 55;
e-126;
i 161;
                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ϋ́
                                                                                                                                                                                                                                      828;
                                                                                                                                                                                                       ω
--
                                                                                                                                                                                                    Gaps
     246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          597
                                                                                                                                                                                                       1
```

```
Sequence 30, Application US/09559019

GENERAL INFORMATION:
APPLICANT: Zhu, Zhenping
APPLICANT: Witte, Larry
ITILE OF INVENTION: Antibodies Specific to KDR and Use
FILE REFERENCE: Sequence Listings 1-34 for 381-71

CURRENT APPLICATION NUMBER: US/09/559,019

CURRENT FILING DATE: 2000-04-25

NUMBER OF SEQ ID NOS: 34

SOFTWARE: Patentin Ver. 2.1

SEQ ID NO 30

LENGTH: 714

TYPE: DNA
ORGANISM: Mouse
US-09-559-019-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 13
US-09-559-019-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               γŞ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δõ
 Ş
                               뭥
                                                      δÃ
                                                                                         망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                  Query Match
Best Local S
Matches 566
   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               727
                                61
                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       caggtgcagctgcagcagtctggggcagagcttgtgaggtcaggggcctcagtcaagttg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ctggaaatcaaa 729
||||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ctgcagctcagcagcctggcatctgaggacactgccgtctattattgtaatttttacgg- 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ctggaaataaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ggagtttattattgctggcaaggtacacattctccgctcacgttcggtgctggcaccaag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ggcagtggatcagggacagatttcacactgaaaatcaacagagtggaggctgagggatttg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ccaaagcgcctaatctatctggtgtctaaactggactctggagtccctgacaggttcact
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ctcttggatagtgatggaaagacatatttgaattggttgttacagaggccaggccagtct 537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    --ggatgctttggactattggggccaagggaccacggtcaccgtctcctcaggtggaggc 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      aatgagaagttcaagggcaaggccacactgacttcagagaaatcctccagcgcagcctac
cctgaacagggcctggagtggattggattgatcctgagaatggtgatactgaatat 180
                             tcctgcacaacttctggcttcaacattaaagacttctatatgcactgggtgaagcagagg
                                             tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg
                                                                                      caggtcaagctgcagtctggggcagagcttgtggggtcaggggcctcagtcaaattg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ggagtttatttctgctctcaaagtacacatgttccgtacacgtccggagggggggccaag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ggcagtggatcagggacagatttcacactcaagatcagcagagtggaggctgaggatctg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ccaaagctcctgatctacaaagtttccaaccgattttctggggtcccagacaggttcagt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cttctacacagtaaaggaaacacctatttacaatggtacctacagaagccaggccagtct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ggttcgggtggtggttcgggttggtggcggatcggatgttgtgatgacccaaactcca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tactatagttacgacgactggggccaaggcaccactctcacagtctcctcaggtggtggt.426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           atggagctcagcagcctggcctctgaggactctgcggtctactactgtgcaagagggggt
                                                                                                                                                                 Similarity
                                                                                                                                                     Conservative
                                                                                                                                                                 60.1%;
77.3%;
                                                                                                                                                   0;
                                                                                                                                                                 Score 438;
Pred. No. 3
                                                                                                                                                     Mismatches
                                                                                                                                                  DB 21;
3.1e-120;
hes 145;
                                                                                                                                                                              Length 714;
                                                                                                                                                                                                                                                                                                                                                                                 Uses
                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                 Thereof
                                                                                                                                                  Gaps
                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      306
                                                                                                                       6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           546
                                                                                                                                                  Ņ
```

```
Sequence 29, Application US/09559019

Sequence 29, Application US/09559019

SEQUENCE INFORMATION:
APPLICANT: Zhu, Zhenping
APPLICANT: Witte, Larry
ITILE OF INVENTION: Antibodies Specific to KDR and Use
FILE REFERENCE: Sequence Listings 1-34 for 381-71

CURRENT APPLICATION NUMBER: US/09/559,019

CURRENT FILING DATE: 2000-04-25

NUMBER OF SEQ ID NOS: 34

SOETWARE: Patentin Ver. 2.1

SEQ ID NO 29

LENGTH: 720

TYPE: DNA
ORGANISM: Mouse
US-09-559-019-29
                 γQ
                                            밁
                                                   Qy Caggtgcagctgcagcagtctggggcagagcttgtgaggtcagggggcctcagtcaagttg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                       US-09-559-019-29
                                                                                               Query Match
Best Local S
Matches 565
                                                                                                                                                                                                                                                                                                                                                                                                                                               703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                   61
                                                                                                 Local Similarity
nes 565; Conserv
                                            ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ctggaaatcaaa
|||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ggagtttattåttgctggcaaggtacacattctcccgctcacgttcggtgctggcaccaag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ggcagtggatcagggacagatttcacactgaaaatcaacagagtggaggctgaggatttg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cccaaactctggatttajtagcacatccaacctggcttctggagtccctgctcgcttcagt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ccaaagcgcctaatctatctggtgtctaaactggactctggagtccctgacaggttcact
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ctcttggatagtgatggaaagacatatttgaattggttgttacagaggccaggccagtct 537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ctcactttgtcggttaccattggacaaccagcctccatctcttgcaagtcaagtcagagc 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gatgctttgga---ctattggggccaagggaccacggtcaccgtctcctcaggtggaggc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ctgcagctcagcatgcatctgaggacactgccgtctattattgtaatttttacggg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gccccgaagttccagggcaaggccaccatgactgcagactcatcctccaacacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctac
                                          caggtcaagctgcagtctggggcagagcttgtggggtcaggggcctcagtcaaattg
                                                                                                                                                                                                                                                                                                                                                                                                                                              ctggaaataaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gccacttattactgccagcaaaggagtagttacccattcacgttcggctcggggaccaag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gcaatcatgtctgcatctccaggggagaaggtcaccataacctgcagtgccagctcaagt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ggtgactacgaaggctactggggccaagggaccacggtcaccgtctcctcaggtggaggc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ctgcagctcagcagcctgacatctgaggacactgccgtctattactgtaatgcatactat 300
                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                               714
                                                                                                              59.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -g--agttacatgcactggttccagcagaagccaggcacttct
                                                                                               Score 436.4; DB 21
Pred. No. 9.3e-120;
0; Mismatches 146;
                                                                                                                                                                                                                                                                                                                  Uses
                                                                                                 Indels
                                                                                                                             Length
                                                                                                  21;
                                                                                                  Gaps
                                             60
                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                  2
```

```
; TYPE: DNA; ORGANISM: Mus musculus PCT-US00-19843-16
                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                    Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                        RESULT 15
PCT-US00-19843-16
                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                  CURRENT APPLICATION NUMBER: PCT/US00/19843
CURRENT FILING DATE: 2000-07-21
PRIOR APPLICATION NUMBER: 60/145,512
PRIOR FILING DATE: 1999-07-23
NUMBER OF SEO ID NOS: 18
SOFTWARE: Patentin Ver. 2.1
SEO ID NO 16
LENGTH: 753
Query Match
Best Local Similarity
Matches 550; Conserv
                                                                                                                                                                                                                                                                                  Sequence 16, Application PC/TUS0019843 GENERAL INFORMATION:
                                                                                                                                                                                                    APPLICANT: Deikman, Alan B.
TITLE OF INVENTION: Recombinant Antibody Directed Against Human TITLE OF INVENTION: Antigen
FILE REFERENCE: 00415-02
                                                                                                                                                                                                                                            APPLICANT: Herr, John C.
APPLICANT: Norton, Elizabeth J.
APPLICANT: Deikman, Alan B.
                                                                                                                                                                                                                                                                                                                                                                                   718
                                                                                                                                                                                                                                                                                                                                                                                                              643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                             703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                     ctggaaatcaaa 729
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ctggaaataaaa
                                                                                                                                                                                                                                                                                                                                                                                                                          ggagtttattattgctggcaaggtacacattctccgctcacgttcggtgctggcaccaag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ccaaagcgcctaatctatctggtgtctaaactggactctggagtccctgacaggttcact
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ctcactttgtcggttaccattggacaaccagcctccatctcttgcaagtcaagtcagagc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ctgcagctcagcatctgaggacactgccgtctattattgtaatttttacggg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cctgaacagggcctggagtggattggatggattgatcctgagaatggtgatactgaatat
                                                                                                                                                                                                                                                                                                                                                                                                            gccacttattactgccagcaaaggagtagttacccattcacgttcggctcggggaccaag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cccaaactctggatttatagcacatccaacctggcttctggagtccctgctcgcttcagt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gcaatcatgtctgcatctccaggggagaaggtcaccataacctgcagtgccagctcaagt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ctgcagctcagcagcctgacatctgaggacactgccgtctattactgtaatgcatactat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gccccgaagttccagggcaaggccaccatgactgcagactcatcctccaacacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cctgaacagggcctggagtggattggattgatcctgagaatggtgattctggttat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tcctgcacaacttctggcttcaacattaaagacttctatatgcactgggtgaagcagagg
 Conservative
              58.5%;
74.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 --agttacatgcactggttccagcagaagccaggcacttct
  0
Score 426.6; DB 1; Pred. No. 8.3e-117; 0; Mismatches 179;
                         Length
                          753;
  ο,
                                                                                                                                                                                                                                 Sperm
  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                               642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
```

```
, B
                         δÃ
                                                                          Ω
                                                                                                    밁
                                                                                                                       Ş
                                                                                                                                                      밁
                                                                                                                                                                              Q
                                                                                                                                                                                                        В
                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
  727
                         715
                                                  667
                                                                           655
                                                                                                    607
                                                                                                                              595
                                                                                                                                                       547
                                                                                                                                                                               535
                                                                                                                                                                                                        487
                                                                                                                                                                                                                                 475
                                                                                                                                                                                                                                                           427
                                                                                                                                                                                                                                                                                 415
                                                                                                                                                                                                                                                                                                          367
                                                                                                                                                                                                                                                                                                                                    355
                                                                                                                                                                                                                                                                                                                                                             307
                                                                                                                                                                                                                                                                                                                                                                                     295
                                                                                                                                                                                                                                                                                                                                                                                                              247
                                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                                               187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7
             ttgggagtttattgctggcaaggtacacattctccgctcacgttcggtgctggcacc
                                                                                                               actggcagtggatcagggacagatttcacactgaaaaatcaacagagtggaggctgaggat
                                                                                                                                                                   totocaaagogoctaatotatotggtgtotaaactggactotggagtcoctgacaggtto
                                                                                                                                                                                                                                                                                                                                                         ctgcagctcagcagcctggcatctgaggacactgccgtctattattgt-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cctgaacaggycctggagtggattggatggattgatcctgagaattggtgatactgaatat
 aagctggaaatcaaa
                                                  ctgggagtttm:tttctgttctcaaagtacacatgttccattcacgttcggctcggggacc
                                                                                                   agtggcagtggatcagggacagatttcacactcaagatcagcagagtggaggctgaggat
                                                                                                                                                                                                       agtettgtacacagtaatagagacacttatttacattggttcctgcagaagccaggccag
                                                                                                                                                                                                                     agcctcttggatagtgatggaaagacatatttgaattggttgttacagaggccaggccag
                                                                                                                                                                                                                                                                    ccactcactttgtcggttaccattggacaaccagcctccatctctttgcaagtcaagtcag
                                                                                                                                                                                                                                                                                                         ggcggttcaggcggaggtggctctggcggtggcggatcggatgttttgatgacccaaact
                                                                                                                                                                                                                                                                                                                                                                                                           atacaactcagcagcctgacatctgaggactccgcggtctattactgtgcaagaggggac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gccccgaagttcccagggcaaggccactatgactgcagacacatcctccaatacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tcctgcacag:ttctggcttcaacattaaagactactatatgcactgggtgaagcagagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   caggtgaaactgcagcaacctgggtctgaaccggtgaggcctggagcttcagtgaaggtg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 caggtgcagctgcagcagtctgggggcagagcttgtgaggtcagggggcctcagtcaagttg
                                                                                                                                                      totocagagotoctgatotacagagtttccaaccgattttctggggtcccagacaggttc
                                                                                                                                                                                                                                                        ccattctccctgcctgtcagtcttggaggtccagcctccatctcttgcagatctagtcag
                                                                                                                                                                                                                                                                                                                                                                                                                                                              gatgtgaagttcaagaacaaggccacactgactgtagacacatcctccagcacagtttac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cctggacaaggccctgagtggattggagatatttatcctggtagtggtgattctaactac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tcctgcagggcttctggctacaaattcaccacctactggatgcactgggtgaggcagagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   126
                                                                          714
                                                                                                    666
                                                                                                                              654
                                                                                                                                                                                                                                                                                                            425
                                                                                                                                                                                                                                                                                                                                    414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                       606
                                                                                                                                                                               594
                                                                                                                                                                                                        546
                                                                                                                                                                                                                                 534
                                                                                                                                                                                                                                                           486
                                                                                                                                                                                                                                                                                   474
                                                                                                                                                                                                                                                                                                                                                             366
                                                                                                                                                                                                                                                                                                                                                                                     354
                                                                                                                                                                                                                                                                                                                                                                                                              306
                                                                                                                                                                                                                                                                                                                                                                                                                                      294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
```

Search completed: February 18, 2001, 01:29:16 Job time: 18114 sec

. . .

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OM nucleic - nucleic search, using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           on:
 Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
 432.2
4425.2
407.4
407.4
351.8
361.8
361.8
352.4
349.2
349.2
349.2
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
349.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Issued_Patents_NA:*

1: /cgn2_6/ptodata/2

2: /cgn2_6/ptodata/2

3: /cgn2_6/ptodata/2

4: /cgn2_6/ptodata/2

5: /cgn2_6/ptodata/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        length: 0
length: 2000000000
 Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  280836 seqs, 80580151 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IDENTITY_NUC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         February 17, 2001, 13:14:09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-297-181-1
729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GenCore version
Copyright (c) 1993 - 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            caggtgcagctgcagcagtc.....gcaccaagctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /cgn2_6/ptodata/2/ina/5A_COMB.seq:*
/cgn2_6/ptodata/2/ina/5B_COMB.seq:*
/cgn2_6/ptodata/2/ina/6COMB.seq:*
/cgn2_6/ptodata/2/ina/FCTUS_COMB.seq:*
/cgn2_6/ptodata/2/ina/backfiles1.seq:*
 1095
1095
1095
1095
1095
1772
772
772
720
720
738
811
748
811
748
811
748
811
748
811
748
811
748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB
                              US-09-296-595-7
US-08-463-163-2
US-08-331-3988-31
US-08-331-3988-31
US-08-759-8048-31
US-08-759-7728-7
US-08-902-486-10
US-08-979-789-17
US-08-952-844-65-10
US-08-553-4978-25
US-08-235-838-15
US-08-465-4738-10
                                                                                                                                                                                                                                                                                                                                                US-08-331-398A-33
US-08-331-397B-33
US-08-759-804A-33
US-08-800-198-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (without alignments)
1400.141 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Search time 83.91 Seconds
                                                 sequence
sequence
sequence
sequence
sequence
                                                                                                                                                                                                                  Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                            Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Description
Sequence
Sequence
                                                                                                                                           Sequence
Sequence
                                                                                                                                                                                Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                     Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
Sequence
                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                10, Appl
17, Appl
25, Appl
15, Appl
15, Appl
10, Appl
10, Appl
17, Appl
17, Appl
19, Appl
19, Appl
                                                                                                                                                                                                                                                                                                            33, Appl
7, Appli
7, Appli
2, Appli
                                                                                                                                                                                                                                   Appl
                                                                                                 Db :
                                                                  Qγ
                                                                                                                                    Q.
                                    g,
                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                 Matches 553;
```

	45	44	43	42	41	40	39	38	37	3 6	35	34	<b>ω</b>	32	31	30	29	
	284	285	288	288	288	288	288	290.6	297.2	297.6	297.6	298.8	299.4	300.2	302.4	305	305.2	
 	39.0	39.1	39.5	39.5	39.5	39.5	39.5	39.9	40.8	40.8	40.8	41.0	41.1	41.2	41.5	41.8	41.9	
	858	712	1460	1460	1460	1460	1460	738	891	2165	2165	797	780	732	336	726	924	
•	N	4	ω	ω	ω	ω	N	N	N	N	Ņ	2	Ν	Ν	ω	2	2	
AT.TGNMENTS	US-08-428-257A-71	PCT-US92-08257-8	US-09-166-094-18	US-09-172-019-18	. US-09-166-093-18	US-09-166-750-18	US-08-392-338A-18	US-08-553-497A-23	US-08-894-922A-9	US-08-263-911-8	US-08-263-911-6	US-08-894-922A-13	US-08-447-402-6	US-08-553-497A-21	US-09-184-658-11	US-08-553-497A-27	US-08-860-174A-9	
	Sequence 71, Appl	Sequence 8, Appli	Sequence 18, Appl	Sequence 18, Appl	`		Sequence 18, Appl	Sequence 23, Appl			~		Sequence 6, Appli	Sequence 21, Appl	Sequence 11, Appl	Sequence 27, Appl	Sequence 9, Appli	

ALIGNMENTS

```
; FEATURE:
; NAME/KEY: mat_peptide
; LOCATION: (95)..(895)
; OTHER INFORMATION: Coding sequence for genetically engineered single
; OTHER INFORMATION: chain antibody - 5109 VH - VL.
US-09-184-658-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 1
US-09-184-658-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 9, Application US/09184658 Patent No. 6030792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Otterness, Ivan G.
APPLICANT: Mezes, Peter S.
APPLICANT: Downs, James T.
APPLICANT: Johnson, Kimberly S.
TITLE OF INVENTION: Assays for Measurement
TITLE OF INVENTION: Biological Media
FILE REFERENCE: PC9946-A
                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/184,658
CURRENT FILING DATE: 1998-11-02
EARLIER APPLICATION NUMBER: 60/065,423
EARLIER FILING DATE: 1997-11-13
NUMBER OF SEQ ID NOS: 69
SOFTWARE: Patentin Ver. 2.0
                                                                                                                       FEATURE:
NAME/KEY: sig_peptide
LOCATION: (29). (94)
OTHER INFORMATION: Engineered
OTHER INFORMATION: methionine
                                                                                                                                                                                                                                                                                                                            LENGTH: 907
TYPE: DNA
                                                                                                                                                                                                                                        OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                 ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                    FEATURE:
                                                                                                                                                                                                                                        Description of Artificial Sequence: single chain antibody.
                                                                                                                                signal peptide in is coded for most
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Protein Fragments
                                                                                                                              pCANTAB6;
likely by
                                                                                                                                                                                                                                                            5109 VH
                                                                                                                           initiator gtg codon.
                                                                                                                                                                                                                                                            - VL
```

156 cctgtgcagcotctggattcactttcaatacctacggcatgtcttgggttcgccagactc

62 cctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagaggc 121

122 ctgaacagggoctggagtggattggatggattgatcctgagaatggtgatactgaatatg 181

.96 aagtgcagctygtggagtctgggggggggctcagtgcagcctggagggtccctgaaactct 155

2 aggtgcagctgcagcagtctggggcagagcttgtgaggtcaggggcctcagtcaagttgt

Local Similarity

59.7%; 75.6%;

Score 435; DB 3; Pred. No. 5e-119;

Mismatches 175; DB 3;

Indels

Ψ

۳.

Conservative

```
RESULT 2
US-08-652-507-1
; Sequence 1, Application
; Patent No. 5876691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                        COUNTRY: UŚA
ZIP: 22201-4714
COMPUTER READABLE FORM:
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/652,507
FILING DATE: 02-Jul-1996
CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
NAME: Arthur R. Crawford
REGISTRATION NUMBER: 25,327
REFERENCE/DOCKET NUMBER: 117-211
                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                       TITLE OF INVENTION: ANTI
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS:
ADDRESSEE: Nixon & Van
                                                                                                                                                                                                                                                                                                                                                                                                                                               816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       182
                                                                                                                                                                                                                 CITY: Arlington STATE: Virginia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   caaagcgcctaatctatctggtgtctaaactggactctggagtccctgacaggttcactg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tcttggatagtgatggaaagacatatttgaatttgttacagaggccaggccagtctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tcactttgtcggttaccattggacaaccagcctccatctttgcaagtcaagtcaggagcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gtaattacgctcgctggggccaaggggcgctggtcactgtctcgagtggtggaggcggtt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             atgctttggactattggggccaagggaccacggtcaccgtctcctcaggtggaggcggtt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tgcagctcagccagcctggcatctgaggacactgccgtctattattgtaatttttacgggg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tggaaatcaaa
|||| | |||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tcactttgtcggttaccattggacaatcagcctccatctttgcaagtcaagtcagagcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      caggcggaggtggcagcggtggcggatcgtctgatgttgtgatgacccaaactccac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    caggcggaggtggctctggcggtggcggatcg---gatgttttgatgacccaaactccac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctacc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                caaagcgcctaatctttctggtgtctgaattggactctggagtccctgacaggttcactg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tcttaggtagtgatggattgacatatttgatttggttgttgcagaggccaggccagtctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tgcaaatgaacaggctgaagtctggggactcaggcatgtattactgtgtaagaggatata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cagacagtgtgaagggccgattcaccatttccagagacaatgccaaaaacaccctgtatc
                                                                                                                                                                                                              Virginia
                                                                                                                                                                                                                                           E: Nixon & Vanderhye, P.C.
1100 No. 5876691th Glebe Road,
                                                                                                                                                                                                                                                                                                                                                                                                                                                 826
                                                                                                                                                                                                                                                                                                                                                                         US/08652507
                                                                                                                                                                                                                                                                                                                 ANTIBODY AGAINST CARCINOEMBRYONIC ANTIGEN
                                                                                  US/08/652,507
                                                                                                                                                                                                                                             8th
                                                                                                               #1.30
                                                                                                                                                                                                                                             Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     275
```

```
Qy
                      Ş
                                               DЪ
                                                                                              밁
                                                                                                                    Š
                                                                                                                                             밁
                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                            밁
                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                    DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; TOPOLOGY: 1; MOLECULE TYPE: US-08-652-507-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: 703-816-4100
INFORMATION FOR SEQ ID NO: 1
SEQUENCE CHARACTERISTICS:
LENGTH: 810 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELECOMMUNICATION INFORMATION:
                                               <sup>₩</sup> 721
                                                                                              661
                                                                                                                                                                                             559
                                                                                                                                                                                                                                                                                           439
781
                                                                                                                                                                                                                                           499
                                                                                                                      589
                                                                                                                                                                    529
                                                                                                                                                                                                                    469
                                                                                                                                                                                                                                                                   409
                                                                                                                                                                                                                                                                                                                                        379
                                                                                                                                                                                                                                                                                                                                                               292
                                                                                                                                                                                                                                                                                                                                                                                      319
                                                                                                                                                                                                                                                                                                                                                                                                                                     259
                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
nes 568; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: 703-816-4000
TELEFAX: 703-816-4100
                                                                                                                                                                                                                                                                                                                                                                                                                                  gccccgaagticcagggcaaggccactatgactgcagacacatcctccaatacagcctac 240
             ggcaccaagctggaaatcaaa
                                                                                              CGCTTCAGTGGCAGTGGATCTGGGACCTCTTACTCTCTCACAATCAGCCGAATGGAGGCT
                                                                                                                                                                                                                                                        caaactccact:cactttgtcggttaccattggacaaccagcctccatctcttgcaagtca
                                                                                                                                                                                                                                                                                                                                                                                                  ctgcagctcagcagcctggcatctgaggacactgccgtctattattgtaat------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAAGATGCTGCCACTTATTACTGCCAGCAAAGGAGTAGTTACCCACTCACGTTCGGTGCT
                                                                                                        aggttcactggcagtggatcagggacagatttcacactgaaaatcaacagagtggaggct
                                                                                                                                                                                           CAGTCTCCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATAACCTGCAGTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tcctgcacagettctggcttcaacattaaagactactatatgcactgggtgaagcagagg
 GGCACCAAGCTGGAGCTGAAA
                                                             GGCACTTCTCCCAAACTCTGGATTTATAGCACATCCAACCTGGCTTCTGGAGTCCCTGCT
                                                                                                                                                         ggccagtctccaaagcgcctaatctatctggtgtctaaactggactctggagtccctgac
                                                                                                                                                                                                                                                                                           GGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCAGAAAATGTGCTCACC
                                                                                                                                                                                                                                                                                                      99t9gaggcggttcaggcggaggtggctctggcggtggcggatcggatgttttgatgacc
                                                                                                                                                                                                                                                                                                                                        CCGACTGGGCCGTACTACTTTGACTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTCA
                                                                                                                                                                                                                                                                                                                                                    ---ttttacgqggatgcttttggactattggggccaagggaccacggtcaccgtctcctca
                                                                                                                                                                                                                                                                                                                                                                                      CTGCAGCTCAGCAGCCTGACATCTGAGGACACTGCCGTCTATTATTGTAATGAGGGGACT 378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         59.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 432.2; DB 2;
Pred. No. 3.2e-118;
0; Mismatches 143;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        810;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 138
                                                                                                                                                                                                                                                                  468
                                                                                                                                                                                                                                                                                                                 408
                                                                                                                     648
                                                                                                                                              660
                                                                                                                                                                    588
                                                                                                                                                                                            600
                                                                                                                                                                                                                    528
                                                                                                                                                                                                                                           558
                                                                                                                                                                                                                                                                                           498
                                                                                                                                                                                                                                                                                                                                        438
                                                                                                                                                                                                                                                                                                                                                              348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                              291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2
```

RESULT 3 US-08-661-052-15 ; Sequence 15, Application

Patent No.

```
Ş
                                                                                                                   Вр
                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-661-052-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 58.3
Best Local Similarity 76.4
Matches 561; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCESS:
CORRESPONDENCE ADDRESS:
CORRESPONDENCE LAHIVE & COCKFIELD
CARREST CARREST COCKFIELD
CARREST CARREST COCKFIELD
CARREST CARREST COCKFIELD
CARREST CARREST COCKFIELD
COCKFIELD
CARREST COCKFIELD
CARREST COCKFIELD
CARREST COCKFIELD
COCKFIELD
CARREST COCKFIELD
CARRET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
LENGTH: 1679 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 07-JUNE-199
ATTORNEY/AGENT INFORMATION:
NAME: Arnold, Beth E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0
FILING DATE: 07-JUNE-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                               1086 TGAGCAGCCTGACATCTGAGGACACTGCCGTCTATTATTGTAATGAGGGGACTCCGACTG 1145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEPHONE: (617)227-7400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                    966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 846 AACTGCAGCAGTCTGGGGGCAGAACTTGTGAGGTCAGGGACCTCAGTCAAGTTGTCCTGCA 905
296 acggggatgctttgggactattggggccaagggaccacggtcaccgtctcctcaggtggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE/DOCKET NUMBER: 35,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cagcttctggcttcaacattaaagactactatatgcactgggtgaagcagaggcctgaac 127
                                                                                                                                                                                                                                                                                                                                                                                                                AGGGCCTGGAGTGGATTGGATTGATCCTGAGAATGGTGATACTGAATATGCCCCGA 1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                  agggcctggagtggattggatggattgatcctgagaatggtgatactgaatatgccccga 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGCTTCTGGCTTCAACATTAAAGACTCCTATATGCACTGGTTGAGGCAGGGGCCTGAAC 965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       agctgcagcagtctggggcagagcttgtgaggtcaaggggcctcagtcaagttgtcctgca 67
                                                                                                                                                         tcagcagcctggcatctgaggacactgccgtctattattgtaat------tttt 295
                                                                                                                                                                                                                                                                 AGTTCCAGGGCAAGGCCACTTTTACTACAGACACATCCTCCAACACAGCCTACCTGCAGC 1085
                                                                                                                                                                                                                                                                                                            agttccagggcaaggccactatgactgcagacacatcctccaatacagcctacctgcagc 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           02109-1875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Boston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chezian Somasundaram
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (617)227-5941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Joel Goldstein
Robert Graziano
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Yashwant M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    THERAPEUTIC
OF ANTI-FC F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              58.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US 08/484,172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US/08/661,052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           35,430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MXI-043CP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 425.2; DB 2;
Pred. No. 5e-116;
0; Mismatches 143;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RECEPTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPOUNDS COMPRISED RECEPTOR ANTIBODIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2;
```

```
US-08-875-811-52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 52, Application US/08875811 Patent No. 6045793
                                                                                                                                                                                                                                                                                                                                                                            COUNTRI. CO...

ZIP: 94111-3834

ZIP: 94111-3834

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

OPERATING SYSTEM: PC-DOS/MS-DOS

OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: Rybak, Susanna
APPLICANT: Newton, Dianne
APPLICANT: Boque, Lluis
    TELEFAX: (415) 576-03
INFORMATION FOR SEQ ID NO:
                                                              FILING DATE: 21-FEB-1996
ATTORNEY/AGENT INFORMATION:
NAME: FAIIS, SUSAN K.
REGISTRATION VUMBER: 41,739
REFERENCE/DOCKET NUMBER: 015:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1206
                                                                                                                                                                                            PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: Patentin Rel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1146 GGCCGTACTACTTTGACTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAG 1205
                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES: 64
CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PPLICANT: Boque, Lluis
PPLICANT: Wlodawer, Alexander
ITLE OF INVENTION: Recombinant Ribonuclease Proteins
                                                                                                                                                                                                                                         APPLICATION NUMBER: WO PILING DATE: 19-FEB-1997
                                                                                                                                                                                                                                                                                                       FILING DATE: · 19-FEB-1998 CLASSIFICATION: 435
                                            TELEPHONE:
                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     agctggaaatcaaa 729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tgggagtttattgttggcgaggtacacattctccgctcacgttcggtgctggcacca 715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ctggcagtggatcagggacagatttcacactgaaaatcaacagagtggaggctgaggatt 555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ctccaaagcgcctaatctatctggtgtctaaactggactctggagtccctgacaggttca 595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gcggttcaggcggaggtggctctggcggtggcggatcggatgttttgatgacccaaactc 415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCTGGAGCTGAAA 1561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGCCACTTATTACTGCCAGCAACGGAGTAGTTACCCACTCACGTTCGGTGCTGGCACCA 1547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTGGCAGTGGATCTGGGACCTCTTACTCTCTCACAATCAGCCGAATGGAGGCTGAAGATG 1487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTCCCAAACTCTGGATTTATAGCACATCCAACCTGGCTTCTGGAGTCCCTGCTCGCTTCA 1427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTGTA----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gcctcttģgatagtgatggaaagacatatttgaattggttgttacagaggccaggccagt 535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATAACCTGCAGTGCCAGCTCAA 1325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cactcactttgtcggttaccattggacaaccagcctccatctcttgcaagtcaagtcaga 475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCAGAAAATGTGCTCACCCAGTCTC 1265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ETWO Embarcadero Center, Eighth Floor
                                              (415) 576-0200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -----AGTTACATGCACTGGTTCCAGCAGAAGCCAGGCACTT 1367
576-0300
576-0300
576-0300
                                                                                                                                                                                                 US 60/011,800
                                                                                                                                                                                                                                                             WO PCT/US97/02588
                                                                                                                                                                                                                                                                                                                                                 US/08/875,811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ۲×
                                                                                        015280-244100US
                                                                                                                                                                                                                                                                                                                                                                                             Version
```

```
RESULT 5
US-08-875-811-54
; Sequence 54, Application US/08875811
; Patent, No. 6045793
                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                   Š
                                                                                                            밁
                                                                                                                                        S
                                                                                                                                                                       밁
                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                              δõ
                                                                                                                                                                                                                                                                                                                                                                멍
                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: CDS;
LOCATION: 1..1095;
OTHER INFORMATION:
US-08-875-811-52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 528;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                            1075
                                                                                                                                                                         1015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE: DNA
                                                                                                                                        721
                                                                                                                                                                                                                                       955
                                                                                                                                                                                                                                                                      601
                                                                                                                                                                                                                                                                                                       895
                                                                                                                                                                                                                                                                                                                    541 aagcgcctaatctatctggtgtctaaactggactctggagtccctgacaggttcactggc
                                                                                                                                                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         355 CAGGTGAAGCTGCAGCAGTCAGGACCTGAAGAAGCCCTGGAGAGACAGTCAAGATC 414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 caggtgcagctgcagcagtctggggcagagcttgtgaggtcaggggcctcagtcaagttg 60
                                                                                                                                                                                                                                    CAGCTCCTGATTTATCAGATGTCCAACCTTGCCTCAGGAGTCCCAGACAGGTTCAGTAGC
                                                                                                                                                                                                                                                                                                                                                                               ttggatagtgatggaaagacatatttgaattggttgttacagaggccaggccagtctcca 540
                                                                                                                                                                                                                                                                                                                                                                                                                                            actttgtcggttaccattggacaaccagcctccatctcttgcaagtcaagtcagagcctc 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tcaggcggaggtggctctggcggtggcggatcggatgttttgatgacccaaactccactc 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       teetgeacagettetggetteaacattaaagaetaetatatgeaetgggtgaageagagg 120
                                                                                                            GAAATCAAA 1083
                                                                                                                            gaaatcaaa
|||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTAAGGGGGACTACTGGGGGCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGCGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gatgctttggactattggggccaagggaccacggtcaccgtctcctcaggtggaggcggt 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cctgaacagggcctggagtggattggatggattgatcctgagaatggtgatactgaatat 180
                                                                                                                                                                       GTTTATTACTGTGCTCAAAATCTAGAAATTCCTCGGACGTTCGGTGGAGGCACCAAGCTG
                                                                                                                                                                                         gtttattattgctggcaaggtacacattctccgctcacgttcggtgctggcaccaagctg
                                                                                                                                                                                                                                                                                                                                                               CTACATAGTAATGGCATCACTTATTTGTATTGGTATCTGCAGAAGCCAGGCÇAGTCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                               TCCAATCCAGTCACTCTTGGAACATCAGCTTCCATCTCCTGCAGGTCTACTAAGAGTCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGACATTGTGCTAACCCAGTCTCCATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTGCAGATCAACAACCTCAAAAATGAGGACACGGCTACATATTTCTGTGCAAGATTCGCT 654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCTGATGACTTCAAGGGACGGTTTGCCTTTTCTCTAGAAACCTCTGCCAGCGCTGCCTAT 594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctac 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCAGGAAAGGGTTTAAAGTGGATGGGCTGGATAAACACCTACACTGGAGAGTCAACATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCTGCAAGGCTTCTGGGTACACCTTCACAAACTATGGAATGAACTGGGTGAAGCAGGCT 474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     55.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note- "MetSerOncA87FBMOC31"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 407.4; DB 3;
Pred. No. 7.3e-111;
0; Mismatches 201;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1095;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                   600
                                                                                                                                                                                                                                                                                                                                                                  894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                534
                                                                                                                                                                                                        720
                                                                                                                                                                                                                                                                                                     954
                                                                                                                                                                                                                                                                                                                                                                                                                               834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
```

```
. Qy
Db ···
                                   δÃ
                                                                                                                                                  В
                                                                                                                                                                                   QΥ
                                                                                                                                                                                                                          Вb
                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                              Matches 528;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 19-FEB-1997

PRIOR APPLICATION DATA:
APPLICATION DATA:
US 60/011,800

FILING DATE: 21-FEB-1996

ATTORNEY/AGENT : NFORMATION:
NAME: Faris, 'Susan K.
REFERENCE/DOCKET NUMBER: 41,739

REGISTRATION NUMBER: 015280-244:
TELECOMMUNICATION INDMERION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: (415) 576-0300
INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
LENGTH: 1098 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
APPLICANT: Rybak,
APPLICANT: Newton
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/08/875,811
FILING DATE: 19-FEB-1998
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: WO PCT/US97/02588
FILING APPLICATION NUMBER: WO PCT/US97/02588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Boque,
APPLICANT: Wlodawe
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: DNA
 244
                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES:
                                 241 ctgcagctcagcagcctggcatctgaggacactgccgtctattattgtaatttttacggg 300
                                                                                                                                                  124
                                                                                                                                                                                       121
                                                                                                                                                                                                                            64
                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: CDS
LOCATION: 1.1098
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: nucleic acid
STRANDEDNESS: sing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ZIP: 94111-3834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY:
                                                                                                                                                                                                                                                                                                    4
                                                                                                                                                                                                                                                                                                                                         μ.
                                                                                         gccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctac 240
                                                                                                                                                                     cctgaacaggccctggagtggattggattgattgatcctgagaatggtgatactgaatat 180
                                                                                                                                                                                                                                             tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg 120
                                                                                                                                                                                                                                                                                                                       caggtgcagctgcagcagtctggggcagagcttgtgaggtcaggggcctcagtcaagttg 60
TTGCAGATCAACAACCTCAAAAATGAGGACACGGCTACATATTTCTGTGCAAGATTCGCT
                                                                                                                                                CCAGGAAAGGGTTTAAAGTGGATGGGCTGGATAAACACCTACACTGGAGAGTCAACATAT
                                                                                                                                                                                                                                                                                                      CAGGTGAAGCTGCAGCAGTCAGGACCTGAGCTGAAGAAGCCTGGAGAGACAGTCAAGATC
                                                                        GCTGATGACTTCAAGGGACGGTTTGCCTTTTCTCTAGAAACCTCTGCCAGCGCTGCCTAT
                                                                                                                                                                                                                          TCCTGCAAGGCTTCTGGGTACACCTTCACAAACTATGGAATGAACTGGGTGAAGCAGGCT 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        E: Townsend and Townsend 
Two Embarcadero Center, E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Newton, Dianne
Boque, Lluis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Wlodawer, Alexander
                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      USA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rybak, Susanna
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Recombinant Ribonuclease Proteins
                                                                                                                                                                                                                                                                                                                                                                                             55.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                54:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ۲ ٦
                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          015280-244100US
                                                                                                                                                                                                                                                                                                                                                                                           Score 407.4;
Pred. No. 7.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "MOC31FBMetSerOnc"
                                                                                                                                                                                                                                                                                                                                                                              Mismatches 201;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        l and Crew LLP
Eighth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Version
                                                                                                                                                                                                                                                                                                                                                                                           , DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                             Length 1098;
                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                   183
                                                                        243
                                                                                                                                                                                                                                                                                                      63
                                                                                                                                                                                                                                                                                                                                                                              0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 6
US-08-331-398A-33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 33, Application US/08331398A Patent No. 5608039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                              CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/
FILING DATE: 28-0CT-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION UMBER: US 07/
FILING DATE: 30-SEP-1991
                                       FILING DATE: 30-SEP-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/596,289
FILING DATE: 12-OCT-1990
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Pastan, Ira
APPLICANT: Willingham, Mark
APPLICANT: FitzGerald, David
APPLICANT: Brinkmann, Ulrich
APPLICANT: Pai, Lee
TITLE OF INVENTION: Single Chain B3 Antibody Fusion
TITLE OF INVENTION: and Their Uses (as amended)
NUMBER OF SEQUENCES: 68
                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and Crew
STREET: One Market Plaza, Steuart Street Plaza
                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361 tcaggcggaggtggctctggcggtggcggatcggatgttttgatgacccaaactccactc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         544 CAGCTCCTGATTTATCAGATGTCCAACCTTGCCTCAGGAGTCCCAGACAGGTTCAGTAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: PatentIn Release #1.0,
                                                                                                                                                                                                                                                                                     COUNTRY:
                                                                                                                                                                                                                                                                                                               STREET: On
CITY: San
  REFERENCE/DOCKET NUMBER:
                REGISTRATION NUMBER:
                               NAME:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gtttattattgctggcaaggtacacattctccgctcacgttcggtgctggcaccaagctg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gaaatcaaa 729
||||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     agtggatcagggacagatttcacactgaaaatcaaccagagtggaggctgaggatttggga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               aagcgcctaatctatctggtgtctaaaactggactctggagtccctgacaggttcactggc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ttggatagtgatggaaagacatatttgaattggttgttacagaggccaggccagtctcca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               actttgtcggttaccattggacaaccagcctccatctcttgcaagtcaagtcagagcctc:480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAAATCAAA 732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGTGGGTCAGGAACTGATTTCACACTGAGAATCAGCAGAGTGGAGGCTGAGGATGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTACATAGTAATGGCATCACTTATTTGTATTGGTATCTGCAGAAGCCAGGCCAGTCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCAATCCAGTCACTCTTGGAACATCAGCTTCCATCTCCTGCAGGTCTACTAAGAGTCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGACATTGTGCTAACCCAGTCTCCATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTTTATTACTGTGCTCAAAATCTAGAAATTCCTCGGACGTTCGGTGGAGGCACCAAGCTG
                                                                                                                                                                                                                                                                       94105-1492
                                                                                                                                                                                                                                                                                                   California
                                                                                                                                                                                                                                                                                       USA
                                                                                                                                                                                                                                                                                                                 Francisco
                                                                                                                US 07/767,331
                                                                                                                                                                       US/08/331,398A
                 38,498
 015280-126110US
                                                                                                                                                                                                   Version
                                                                                                                                                                                                   #1.30
                                                                                                                                                                                                                                                                                                                                                                                                     Proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   540
                                               VQ
                                                                                                               Ş
                                                                                                                                           멍
                                                                                                                                                                    QΥ
                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                  ď
                                                                                                                                                                                                   망
                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                        Ŋ
                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                              <sub>₹</sub>571
                                                                                                                                                                       473
                                                                                                                                                                                                                              413
                             631
                                                                                                                                         511
                                                                                                                                                                                                                                                        391
                                                                                                                                                                                                                                                                                                                                                                                                 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                            182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        151
  653
                                                                                                                                                                                                                                                                                     353
                                                                                                                                                                                                                                                                                                                                                                         271
                                                                                                                                                                                                                                                                                                                                                                                                                                211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   122
                                                                                                                                                                                                                                                                                                                                           293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          62
atttgggagtttattattgctggcaaggtacacattctccgctcacgttcggtgctggca
```

```
; NAME/KEY:
; LOCATION:
US-08-331-398A-33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCATION: 1.772
OTHER INFORMATION:
OTHER INFORMATION:
OTHER INFORMATION:
OTHER INFORMATION:
OTHER INFORMATION:
OTHER INFORMATION:
J
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: (415) 543-5043 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY: 1
MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                 451 CTCCATTGAGTTTACCTGTCAGTCTTGGAGATCAAGCCTCCATCTCTTGCAGATCTAGTC
                                                                                                                                                                                                                                                                                                                                                                                                               331 CCTGGGGAGCCTGGTTTGCTTACTGGGGCCAAGGGACTCTGGTCACTGTCTCCTCAGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 772 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31 ATGTGAAGCTGGTGGAGTCTGGGGGAGGCTTAGTGCAGCCTGGAGGGTCCCTGAAACTCT 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 aggtgcagctgcagcagtctggggcagagcttgtgaggtcaggggcctcagtcaagttgt 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                  tttacggggatgcttttggactattggggccaagggaccacggtcaccgtctcctcaggtg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ctgaacagggcctggagtggattggatggattgatcctgagaatggtgatactgaatatg
                                                                                                                                                                                     ctccactcactttgtcggttaccattggacaaccagcctccatctcttgcaagtcaagtc
                                                                                                                                                                                                                                                                                                                              GAGGCGGATCCGGTGGCGGATCTGGAGGTGGCCGGAAGCGATGTGCTGATGACCCAGT
                                                                                                                                                                                                                                                                                                                                                   ccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctacc 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagaggc 121
                         tcactggcag.tggatcagggacagatttcacactgaaaatcaacagagtggaggctgagg
                                                                                                        agtetecaaagegeetaatetatetggtgtetaaaetggaetetggagteeetgaeaggt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAGACACTGTAAAGGGCCGGTTCACCATCTCCAGAGACAATGCCAGGAACACCCCTCTACC
                                                                                 AGTCTCCAAAGCTCCTGATCTACAAAGTTTCCAACCGATTTTCTGGGGTCCCAGACAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tgcagctcagcagcctggcatctgaggacactgccgtctattattgt-----aatt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGAGAAGAGGCTGGAGTGGGTCGCATACATTAGTAATGATAGTTCCGCCGCCTTATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCTGTGCAACCTCTGGATTCACTTTCAGTGACTATTACATGTATTGGGTTCGCCAGACTC
                                                                                                                                                                AGATCATTGTACATAGTAATGGAAACACCTATTTAGAATGGTACCTGCAGAAACCAGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGCAAATGAGCCGTCTGAAGTCTGAGGACACAGCCATATATTCCTGTGCAAGAGGACTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             511;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDS
27..770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   543-9600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                49.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note= "Single-chain antibody fusion protein of 83 monoclonal antibody Variable Heavy chain (V-H) and Variable Light chain (V-L) FV region joined by a (Gly-4Ser)-3 peptide linker"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 361.8; DB 1;
Pred. No. 1.7e-97;
0; Mismatches 217;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          772;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             150
                                      652
                                                                                 630
                                                                                                                       592
                                                                                                                                                                                                                                               510
                                                                                                                                                                                                                                                                                     472
                                                                                                                                                                                                                                                                                                                              450
                                                                                                                                                                                                                                                                                                                                                                      412
690
                                                                                                                                                             570
                                                                                                                                                                                                      532
                                                                                                                                                                                                                                                                                                                                                                                                               390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                210
                                                                                                                                                                                                                                                                                                                                                                                                                                                   352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              330
```

1:

```
Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
Query Match
Best Local Simi
                                                                                    US-08-331-397B-33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-331-397B-33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Patent No. 5981726
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 33,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: TAM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTA Release #1.0, Ver.
CURRENT APPLICATION DATA:
APPLICATION UMBER: US/08/331,397B
FILING DATE: 28-OCT-1994
                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: (415) 543-5043 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: 01
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 543-9600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/596,289
FILING DATE: 12-0CT-1990
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                 STRANDEDNESS: single TOPOLOGY: linear MOLECULE TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES: 68
CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Crew
ADDRESSEE: Townsend and Townsend and Crew
STREET: One Market Plaza, Steuart Street Plaza
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Pastan, 11a
APPLICANT: Benhar, Ital
APPLICANT: Chi
                                                                                                                                      FEATURE:
                                                                                                                                                LOCATION: 1..772
OTHER INFORMATION:
OTHER INFORMATION:
OTHER INFORMATION:
OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       713
                                                                                                  NAME/KEY:
                                                                                                                                                                                                                                                  NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: Hunter, Tom REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: US 0 FILING DATE: 30-SEP-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                 ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAAAGCTGGAAATTAAA 767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ccaagctggaaatcaaa 729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               94105-1492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             San Francisco
                                                                                                                                                                                                                                                                                                                               nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Application US/08331397B
                                                                                                                                                                                                                                                                                                                                                 772 base pairs
     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chimeric
Specific
Thereof
                    49.6%;
                                                                                                                                                  protein of B3 monoclonal antibody Variable Heavy chain (V-H) and Variable Light chain (V-L) Fv region joined by a (Gly-4Ser)-3 peptide linker"
                                                                                                                                                                                                                  /note= "Single-chain antibody fusion
                                                                                                                                                                                                                                                                                                                                                                                                                                                           38,498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              07/767,331
     .,
                                                                                                                                                                                                                                                                                                                                                                                                                                                 015280-126120US
                    Score 361.8; DB 2; Pred. No. 1.7e-97;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            and Mutationally Stabilized Tumor-
Antibody Fragments, Fusion Protein
     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #1.30
     Indels
                                   Length
                                     772;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Proteins,
     9
   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Uses
     1.
```

```
Š
                                                                                                                                                                                                                                                                               RESULT 8
US-08-759-804A-33
                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                         Ď,
                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멇
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: Pastan, Ira
APPLICANT: Willingham, Mark
APPLICANT: PitzGerald, David J.
APPLICANT: Brirkmann, Ulrich
APPLICANT: Pai, Lee
                                                                                                                                                                                                                                                Patent No.
                                                                                                                                                                                                                                                  Sequence 33, Application US/08759804A Patent No. 5990296
                                                                        CORRESPONDENCE ADDRESS:
ADDRESSEE: "Townsend and Townsend and Crew LLP
                                                                                                       TITLE OF INVENTION: Tumor-Specific Antibody Fragments TITLE OF INVENTION: Fusion Proteins, and Uses Thereof NUMBER OF SEQUENCES: 68
                                                                                                                                                                                                                                                                                                                                          713 ccaagctggaaatcaaa
| ||||||||||||
| 751 CAAAGCTGGAAATTAAA
                                                                                                                                                                                                                                                                                                                                                                                                        691
                                                                                                                                                                                                                                                                                                                                                                                                                        653 atttgggagti:tattattgctggcaaggtacacattctccgctcacgttcggtgctggca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    593 tcactggcagtggatcagggacagatttcacactgaaatcaacagagtggaggctgagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31
           COUNTRY:
                              STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tgcagctcagcagcctggcatctgaggacactgccgtctattattgt-----aatt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGTCTCCAAAGCTCCTGATCTACAAAGTTTCCAACCGATTTTCTGGGGTCCCAGACAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 agtotocaaagogootaatotagotgtottaaactggaototggagtocotgacaggt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             agagcctcttugatagtgataggaaagacatatttgaattggttgttacagaggccaggcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tttacggggatgctttggactattggggccaagggaccacggtcaccgtctcctcaggtg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctacc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAGAGAAGAGGCTGGAGTGGGTCGCATACATTAGTAATGATGATAGTTCCGCCGCTTATT 210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCTGTGCAACCTCTGGATTCACTTTCAGTGACTATTACATGTATTGGGTTCGCCAGACTC 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cctgcacagc:tctggcttcaacattaaagactactatatgcactgggtgaagcagaggc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGTGAAGCTGGTGGAGTCTGGGGGGGAGGCTTAGTGCAGCCTGGAGGGTCCCTGAAACTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 aggtgcagctgcagcagtctggggcagagcttgtgtgaggtcaggggcctcagtcaagttgt
                                                                                                                                                                                                                                                                                                                                                                                                      ATCTGGGAGTTATTACTGCTTTCAAGGTTCACATGTTCCATTCACGTTCGGCTCGGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCAGTGGCAGTGGATCAGGGACAGATTTCACACTCAAGATCAGCAGAGTGGAGGCTGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGATCATTGTACATAGTAATGGAAACACCTATTTAGAATGGTACCTGCAGAAACCAGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGGCGGATCCGGTGGTGGCGGATCTGGAGGTGGCGGAAGCGATGTGCTGATGACCCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCTGGGGAGCCTGGTTTGCTTACTGGGGCCAAGGGACTCTGGTCACTGTCTCCTCAGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGCAAATGAGCCGTCTGAAGTCTGAGGACACAGCCATATATTCCTGTGCAAGAGGACTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGACACTGTNAAGGGCCGGTTCACCATCTCCAGAGACAATGCCAGGAACACCCTCTACC
NY: USA
94111-3634
                                             San
                             California
                                                           Two Embarcadero Center, Eighth Floor
                                           Francisco
                                                                                                                                                                                                                                                                                                                                                                         729
                                                                                                                                                                                    4
                                                                                                                                                                                                                                                                                                                                                                                                                                       712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               90
```

690 652 630

750

```
PRIOR METELLON NUMBER: US 08/331,398
FILING DATE: 28-OCT-1994
PRIOR APPLICATION NUMBER: US 07/767,331
FILING DATE: 30-SEP-1991
PRIOR APPLICATION NUMBER: US 07/596,289
FILING DATE: 12-OCT-1990
ATTORNEY/AGENT INFORMATION:
NAME: Weber, Ellen L.
REGISTRATION NUMBER: 32,762
REFERENCE/DOCKET NUMBER: 32,762
REFERENCE/DOCKET NUMBER: 015280-126140US
TELECHOME: (415) 576-0300
INFORMATION FOR SEQ ID NO: 33:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-759-804A-33
                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity 69. Matches 511; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
LENGTH: 772 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCATION: 1..772
OTHER INFORMATION:
OTHER INFORMATION:
OTHER INFORMATION:
OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE:
 331 CCTGGGGAGCCTGGTTTGCTTACTGGGGCCAAGGGACTCTGGTCACTGTCTCCTCAGGCG
                                                                                                                                                211
                                                                                                                                                                                     182
                                                                                                                                                                                                                         151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOETWARE: Patentin Palanament
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                   91
                                                                                                                                                                                                                                                                                                                                   62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: FILING DATE: 03-DE
                                                                                                                                                                                                                                                                                                                                                                        31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                           cctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagaggc 121
                       tttacggggatgctttggactattggggccaagggaccaacggtcaccgtctcctcaggtg
                                                                                                                                                                                                                       CAGAGAAGAGGCTGGAGTGGGTCGCATACATTAGTAATGATGATAGTTCCGCCGCTTATT
                                                                                                                                                                                                                                                                                               CCTGTGCAACCTCTGGATTCACTTTCAGTGACTATTACATGTATTGGGTTCGCCAGACTC
                                                                                                                                                                                                                                                                                                                                                                        ATGTGAAGCTGGTGGAGTCTGGGGGGAGGCTTAGTGCAGCCTGGAGGGTCCCTGAAACTCT 90
                                                                                                                                              CAGACACTGTAAAGGGCCGGTTCACCATCTCCAGAGACAATGCCAGGAACACCCTCTACC
                                                                                                                                                                                 ccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctacc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      03-DEC-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                               49.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Variable Heavy chain (V-H) and variable Light chain (V-L) Fv region joined by a (Gly-4Ser)-3 peptide linker"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note= "Single-chain antibody fusion
protein of B3 monoclonal antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US/08/759,804A
                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 361.8; DB 2;
Pred. No. 1.7e-97;
0; Mismatches 217;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 772;
                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
390
                                                                         330
                                                                                                           292
                                                                                                                                                                                   241
                                                                                                                                                270
                                                                                                                                                                                                                       210
                                                                                                                                                                                                                                                                                                                                                                                                                                             ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-800-198-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 7, Ap
Patent No. 594
                                                                                                                                            REFERENCE/DOCKET NUMBER: SC
TELECOMMUNICATION INFORMATION:
TELEPHONE: 73-243-6333
TELEFAX: 703-243-6410
INFORMATION FOR SEQ ID NO: 7:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                  CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/800,198
FILING DATE: 13-FEB-1997
CLASSIFICATION: 530
-ATTORNEY/AGENT INFORMATION:
NAME: HAMLET-KING, DIANA
                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy (
COMPUTER: IBM PC com.)
                                                                                                        SEQUENCE CHARACTERISTICS:
LENGTH: 720 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: WELS, WINFRIED S.
APPLICANT: SCHMIDT, MATHIAS
APPLICANT: VAKALOPOULOU, EVANGELIA
                 MOLECULE TYPE:
HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: SCHNEIDER, DOUGLAS
TITLE OF INVENTION: GROWTH FACTOR RECEPTOR
NUMBER OF SEQUENCES: 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  713 ccaagctggaaatcaaa 729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 571 AGTCTCCAAAGCTCCTGATCTACAAAGTTTCCAACCGATTTTCTGGGGTCCCAGACAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             391 GAGGCGGATCCGGTGGCGGATCTGGAGGTGGCGGAAGCGATGTGCTGATGACCCAGT 450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  353
                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
ZIP: 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           751 CAAAGCTGGAAATTAAA 767
                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                    TOPOLOGY:
                                                                   TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                       REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              atttgggagtttattattgctggcaaggtacacattctccgctcacgttcggtgctggca 712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCAGTGGCAGTGGATCAGGGACAGATTTCACACTCAAGATCAGCAGAGTGGAGGCTGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      agtotocaaagogootaatotatotggtgtotaaaotggaototggagtocotgacaggt 592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGATCATTGTACATAGTAATGGAAACACCTATTTAGAATGGTACCTGCAGAAACCAGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            agagcctcttggatagtgatggaaagacatatttgaattggttgttacagaggccaggcc 532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gaggcggttcaggcggaggtggctctggcggtggcggatcggatgttttgatgacccaaa 412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATCTGGGAGTTTATTACTGCTTTCAAGGTTCACATGTTCCATTCACGTTCGGCTCGGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | tcactggcagtggatcagggacagatttcacactgaaaatcaacagagtggaggctgagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ARLINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Application US/08800198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ٧A
                                                                                                        720 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          us ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3: MILLEN, WHITE, ZELANO & BRANIGAN, P.C 2200 CLARENDON BLVD. SUITE 1400
 ö
                                                     linear
                 ã
                                                                                                                                                                                                                                                                                                                                                                                                                          Floppy disk
                                  other nucleic acid
                                                                                                                                                                                                                                     33,302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ANTIBODIES
```

В Ş 밁 Š 밁 δÃ В Ş 밁 Qy

δÃ

6.3

```
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: WELS, WIMPRIED S.
APPLICANT: SCHMIDT, MATHIAS
APPLICANT: VARALOPOULOU, EVANGELIA
APPLICANT: SCHNEIDER, DOUGLAS
TITLE OF INVENTION: GROWTH FACTOR RECEPTOR AN
FILE REFERENCE: SCH-1576 D1
CURRENT APPLICATION NUMBER: US/09/296,595A
CURRENT FILING DATE: 1999-04-23
                                                                                                                            RESULT 10
US-09-296-595-7
                                                                                                                                                                                              8
                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                          Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           γ
                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-800-198-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 514
                                                                                                     Sequence 7, Application US/09296595A Patent No. 6129915
                                                                                                                                                                                                                       646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                         706
                                                                                                                                                                                                712
                                                                                                                                                                                                                                                                    586
                                                                                                                                                                                                                                                                                         592
                                                                                                                                                                                                                                                                                                                526
                                                                                                                                                                                                                                                                                                                                      532
                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                    472
                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                412
                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                   ttcactggcagtggatcagggacagatttcacactgaaaatcaacagagtggaggctgag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              accaagctggaaat
                                                                                                                                                                                                                                   gatttgggagtttattattgctggcaaggtacacattctccgctcacgttcggttgctggc
                                                                                                                                                                                                                                                                                                                                                                                                                    actccactcactttgtcggttaccattggacaaccagcctccattttgtcaagtcaagt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ggaggcggttcaggcggaggtggctctggcggtggcggatcggatgttttgatgacccaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cctgaacagggcctggagtggattggatggattgatcctgagaatggtgatactgaatat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       514;
                                                                                                                                                                           ACAAAGCTCGAGAT
                                                                                                                                                                                                                       GATATTGCAGATTATTACTGTCAACAAAGTGATAGCTGGCCAACCACGTTCGGTGCTGGG
                                                                                                                                                                                                                                                                                                               GGTTCTCCAAGGCTTCTCATAAAGTATGCTTCTGAGTCTATCTCTGGGATCCCTTCCAGG
                                                                                                                                                                                                                                                                                                                                                             CAGAGCAT-----TGGCACAAATATACACTGGTATCAGCAAAGAACAAAT
                                                                                                                                                                                                                                                                                                                                                                         GGTGGCGGTTCTGGTGGCGGTGGCTCCGGCGGTGGCGGTTCTGACATCCAGCTGACCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TACTACGGCTACGACTTTGCTTACTGGGGCCAAGGGACCACGGTCACCGTTTCCTCTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ttttacggggatgctttggactattggggccaagggaccacggtcaccgtctcctcaggt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCTGGACAGGTGCTGGTATGGATTGGATACACTAATCCTAACACTGGTTATACTGATTTC
                                                                                                                                                                                                                                                                                                                                     cagtctccaaagcgcctaatctatctggtgtctaaactggactctggagtccctgacagg
                                                                                                                                                                                                                                                                                                                                                                                                           TCTCCAGCCATCCTGTGTGAGTCCAGGAGAAAGAGTCAGTTTCTCCTGCAGGGCCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGGTGCAGCTGCAGGAGTCTGGGGGCCTGAACTGGCAAAACCTGGGGGCCTCAGTGAAGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           48.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred. No. 9.7e-95; 0; Mismatches 196;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 352.4;
Pred. No. 9.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                             711
                                                                                                                                                                                                                                                                    645
                                                                                                                                                                                                                                                                                                                                                                                                                               471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             411
                                                                                                                                                                                                                       705
                                                                                                                                                                                                                                                                                         651
                                                                                                                                                                                                                                                                                                                585
                                                                                                                                                                                                                                                                                                                                       591
                                                                                                                                                                                                                                                                                                                                                             525
                                                                                                                                                                                                                                                                                                                                                                                   531
                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                      420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2;
```

```
; EARLIER APPLICATION NUMBER: 08/800,198; EARLIER FILING DATE: 1997-02-13; NUMBER OF SEQ ID NOS: 18; SOFTWARE: Patentin Ver. 2.1; SEQ ID NO 7; LENGTH: 720; TYPE: DNA; ORGANISM: Murine.sp.
US-09-296-595-7
RESULT 11
US-08-463-163-2
; Sequence 2, Application U
; Patent No. 5696237
; GENERAL INFORMATION:
                                                                                                     ۾
کو _ کو
                                                                                                                                                              밁
                                                                                                                                                                                         Qy
                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                       δõ
                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                            δõ
                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ΩV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 48.3%;
Best Local Similarity 70.0%;
Matches 514; Conservative
                                                                                                  712 accaagctggeaat 725
|| || || || || || 706 acaaagctcgagat 719
                                                                                                                                                              646
                                                                                                                                                                                         652
                                                                                                                                                                                                                       586
                                                                                                                                                                                                                                                  592
                                                                                                                                                                                                                                                                              526
                                                                                                                                                                                                                                                                                                         532
                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                472
                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                       412
                                                                                                                                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 caggtgcagctgcagcagtctggggcagagcttgtgaggtcaggggcctcagtcaagttg
                                                                                                                                                                           gatttgggagtttattattgctggcaaggtacacattctccgctcacgttcggtgctggc
                                                                                                                                                                                                                                    ttcactggcagtggatcagggacagatttcacactgaaaatcaacagagtggaggctgag
                                                                                                                                                                                                                                                                                             cagtotocaaagogootaatotatotggtgtotaaactggactotggagtocotgacagg
                                                                                                                                                                                                                                                                                                                                                   tctccagccatcctgtctgtgagtccaggagaaagagtcagtttctcctgcagggccagt
                                                                                                                                                                                                                                                                                                                                                                                                          actccactcactttgtcggttaccattggacaaccagcctccatctcttgcaagtcaagt
                                                                                                                                                                                                                                                                                                                                                                                                                                               ggtggcggttctggcggtggctccggcggtggcggttctgacatccagctgacccag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ggaggcggttcaggcggaggtggctctggcggtggcggatcggatgttttgatgacccaa 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ctgcagctcagcagcctggcatctgaggacactgccgtctattattgt-----aat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cctgaacagggcctggagtggattggatggattgatcctgagaattggtgatactgaatat
                                                                                                                                                           gatattğcagettattactgtcaacaaagtgatagctggccaaccacgttcggtgctggg
                                                                                                                                                                                                                    tttagtggcagtggatcagggacagattttactcttagcatcaacagtgtggagtctgca
                                                                                                                                                                                                                                                                            ggttctccaaggcttctcataaagtatgcttctgagtctatctctgggatcccttccagg
                                                                                                                                                                                                                                                                                                                                  cagagcat------tggcacaaatatacactggtatcagcaaagaacaaat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 atgcaactgagcggcctgácatctgaggactctgcagtctattactgtgcaagaggggat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           aatcagaagttcaaggacaaggccacattgactgcagacaaatcctccagcacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cctggacaggigctggtatggattggatacactaatcctaacactggttatactgatttc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tcctgcaaggcttctggctacacctttactaactactggatgcactgggtgacacagagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 caggtgcagctgcaggagtctggggctgaactggcaaaacctgggggcctcagtgaagatg
                                US/08463163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 352.4; DB 3;
Pred. No. 9.7e-95;
0; Mismatches 196;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      720;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                       471
                                                                                                                                                                                                                                                                                                                                     525
                                                                                                                                                                                                                                                                                                                                                                                            480
                                                                                                                                                                                                                                                                                                                                                                                                                                                     420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                         711
                                                                                                                                                                                                                       645
                                                                                                                                                                                                                                                  651
                                                                                                                                                                                                                                                                              585
                                                                                                                                                                                                                                                                                                          591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
```

```
; NAME/KEY: CDS; LOCATION: 1..1797; OTHER INFORMATION: US-08-463-163-2
                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 502; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: (415) 543-5043 (NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: 01
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 543-9600
                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION: NAME: Weber, Ellen L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                    124
181 gccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctac 240
                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 21-APR-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: US 0 FILING DATE: 22-JAN-1981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: FILING DATE: 05-JUN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OPERATING SYSTEM:
                                                                                                 64
                                                                                                                                51
                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                               STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
                                                     tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagagg 120
                                                                                                                                                                                  TCCTGCAAGGCTTCTGGCTACACCTTTACTAGCTACAGGATGCACTGGGTAAAACAGAGG 123
                                                                                                                                                               CAGGTCCAGCTGCAGCAGTCTGGGGCCTGAACTGGCAAAACCTGGGGGCCTCAGTGAAGATG 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     94105-1492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                              nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 E: Townsend and Townsend and Crew
One Market Plaza, Steuart Street Tower
                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PatentIn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Queen, Cary L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Waldmann,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pastan,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chaudhary, Vijay K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FitzGerald, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  E: Floppy disk
IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      lNF(-
, Ellen L.
, 22,762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  UMBER: US/08/463,163
05-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JMBER: US 06/911,227
24-SEP-1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    08-APR-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21-APR-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                 single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ira H
                                                                                                                                                                                                                                            47.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Recombinant Antibody-Toxin Fusion Protein
                                                                                                                                                                                                                                                                                                                               /product= "Anti-Tac(Fv)-PE40"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US 07/341,361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Thomas A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US 07/865,722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US 06/227,227
                                                                                                                                                                                                                               Score 349.2; DB 1;
Pred. No. 1.2e-93;
0; Mismatches 208;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   015280-12211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ч
                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                               1797;
                                                                                                                                                                                                                               18;
                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-331-398A-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 31,
Patent No. 5
                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
APPLICANT:
                                                                                                                 CURRENT APPLICATION DATA:
                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                              APPLICATION NUMBER: US/0 FILING DATE: '28-OCT-1994 CLASSIFICATION: 435 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                            ADDRESSEE: Townsend
                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: Single Character of INVENTION: and Their
 PRIOR APPLICATION DATA
                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    244 ATGCAACTGAGCCTGACATTTGAGGACTCTGCAGTCTATTACTGTGCAAGAGGGGGG
                                                                                                                             COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Release #1.0,
               APPLICATION NUMBER: US 07/767,331 FILING DATE: 30-SEP-1991
                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                 CITY:
                                                                                                                                                                                                                                                                               STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    agtggatcagggacagatttcacactgaaaaatcaacagagtggaggctgaggatttggga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -------AGTTACATGCACTGGTTCCAGCAGAAGCCAGGCACTTCTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ttggatagtgatggaaagacatatttgaattggttgttacagaggccaggccagtctcca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gatgctttggactafttggggccaagggaccacggtcaccgtctcctcaggtggaggcggt 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGCTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gaaatcaa 728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACTTATTACTGCCATCAAAGGAGTACTTACCCACTCACGTTCGGTTCTGGGACCAAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gtttattattgctggcaaggtacacattctccgctcacgttcggtgctggcaccaagctg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAACTCTGGATTTATACCACATCCAACCTGGCTTCTGGAGTCCCTGCTCGGTTCAGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              aagcgcctaatctatctggtgtctaaactggactctggagtccctgacaggttcactggc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     actttgtcggttaccattggacaaccagcctccatctcttgcaagtcaagtcagagcctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tcaggcggaggtggctctggcggtggcggatcggatgttttgatgacccaaactccactc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGGGTCTTTGACTACTGGGGCCAAGGAACCACTCTCACAGTCTCCTCCGGAGGCGGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGTGGATCTGGGACCTCTTACTCTCTCACAATCAGCCGAATGGAGGCTGAAGATGCTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATAACCTGCAGTGCCAGCTCAAGTATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCGGGCGGTGGCGGCTGGCGGCGCCTCTCAAATTGTTCTCACCCCAGTCTCCAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION:
                                                                                                                                                                                                               94105-1492
                                                                                                                                                                                                                                            San Francisco
California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  l, Application US/08331398A
5608039
                                                                                                                                                                                                                                                                               E: Townsend and Townsend One Market Plaza, Steuart
                                                                                                                                                                                                                                                                                                                                                                                                            Pastan, Ira
Willingham, Mark
FitzGerald, David
                                                                                                                                                                                                                                  USA
                                                                                                                                                                                                                                                                                                                                                                                 Pai', Lee
                                                                                                                                                                                                                                                                                                                                                                                              Brinkmann, Ulrich
                                                                                                                                                                                                                                                                                                                                              Single Chain Band Their Uses
                                                                                                US/08/331,398A
                                                                                                                                                                                                                                                                                Steuart
                                                                                                                                                                                                                                                                                                                                              B3 Antibody Fusion es (as amended)
                                                                                                                                                                                                                                                                               d and Crew
                                                                                                                                Version
                                                                                                                                                                                                                                                                                Plaza
```

645 660 585 600 525

720

540 483 480 420 363 303 300 243

Š g Ş В δÃ B

```
Š
                                                                                                                                                                                                                                Š
                  δõ
                                                     몼
                                                                                                                          В
                                                                                                                                                           δÃ
                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; LOCATION: 1..738
; OTHER INFORMATION:
US-08-331-398A-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: (415) 543-5043 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REGISTRATION NUMBER: 38,498
REFERENCE/DOCKET NUMBER: 015280-126110US
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 543-9600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
NAME: Hunter Tom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE: DNA
                                                                                                                                                               533
                                                                                                                                                                                                  482
                                                                                                                                                                                                                                    473
                                                                                                                                                                                                                                                                                                                                              362
                                                                                                                                                                                                                                                                                                                                                                               353
                                                                                                                                                                                                                                                                                                                                                                                                                    302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        122 ctgaacagggcctggagtggattggatggattgatcctgagaatggtgatactgaatatg 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           62 cctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagaggc 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US 07/596,289 FILING DATE: 12-OCT-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 aggtgcagctgcagcagtctggggcagagcttgtgaggtcaggggcctcagtcaagttgt 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ENGTH:
atttgggagtttattattgctggcaaggtacacattctccgctcacgttcggtgctggca
                                                                        ctccactcactttgtcggttaccattggacaaccagcctccatctcttgcaagtcaagtc 472
                                                                                                                                                                                                                                                                                                                                                                                                                                       tttacggggatgctttggactattggggccaagggaccacggtcaccgtctcctcaggtg 352
                                                                                                                   AGTCTCCACAGCTGCTGATCTACAAAGTTTCCAACCGATTTTCTGGGGTCCCCAGACAGGT 601
                                                                                                                                                           agtotocaaagogcotaatotatotggtgtotaaactggactotggagtocotgacaggt 592
                                                                                                                                                                                                 AGATCATTGTACATAGTAATGGAAACACCTATTTAGAATGGTACCTGCAGAAACCAGGCC
                                                                                                                                                                                                                                                                     CTCCATTGAGTTTACCTGTCACCCCGGGAGAGCCGGCCTCCATCTCTTGCAGATCTAGTC
                                                                                                                                                                                                                                                                                                                                            GAGGCGGATCCGGTGGTGGCGGATCTGGAGGTGGCGGAAGCGATGTGCTGATGACCCAGT 421
                                                                                                                                                                                                                                                                                                                                                                CCTGGGGAGCCTGGTTTGCTTACTGGGGCCAAGGGACTCTGGTCACTGTCTCCTCAGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGCAAATGAACCGTCTGCGCGCGAGGACACAGCCATATATTCCTGTGCAAGAGGACTGG 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tgcagctcagcagcctggcatctgaggacactgccgtctattattgt-----aatt 292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAGACACTGTAAAGGGCCGGTTCACCATCTCTAGAGACAATAGCAAGAACACCCTCTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctacc 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCTGTGCAACCTCTGGATTCACTTTCAGTGACTATTACATGTATTGGGTTCGCCAGGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCAGTGGCAGTGGATCAGGGACAGATTTCACACTCAAGATCAGCAGAGTGGAGGCTGAGG
                                                                                                                                                                                                                                agagcctcttggatagtgatggaaagacatatttgaattggttgttacagaggccaggcc 532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGGCCAAGGGCCTGGAGTGGGTCGCATACATTAGTAATGATAGTTACTTCCGCCGCTTATT 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  503;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 738 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               47.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note= "Humanized B3 single-chain Fv"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 349; DB 1;
Pred. No. 9.9e-94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 738;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                  712
                                                                                                                                                                                                                                                                       481
                                                     661
                                                                                                                                                                                               541
                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ۲.
```

```
V.
                             γ
                                                                밁
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                     US-08-331-397B-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-331-397B-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 31, App
Patent No. 59817
                                                                                                                                                    Best
                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION UNMBER: US 07/767,331
FILING DATE: 30-SEP-1991
PRIOR APPLICATION DATA:
APPLICATION UNMBER: US 07/596,289
FILING DATE: 12-OCT-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                      TELECOMMUNICATION INFORMATION: TELEPHONE: (415) 543-9600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: Patentin Release #1.0, Version CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/331,397B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDITM TYPE: Floppy disk
COMPUTER: IBH PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                     FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                       MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT ENFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     662 ACGTCGGAGTTTATTACTGCTTTCAAGGTTCACATGTTCCATTCACGTTCGGCCAGGGTA 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      722 CCAAGGTCGAAATTAAA 738
                               62
                                                                                                                                                                                                                                   NAME/KEY: - .
LOCATION: 1.:738
OTHER INFORMATION:
 62
                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                   TYPE: nucleic acid
STRANDEDNESS: sing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Hunter, Tom REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                      TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                       ENGTH:
                                                                                              2 aggtgcagctgcagcagtctggggcagagcttgtgaggtcaggggcctcagtcaagttgt 61
                    cctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaagcagaggc 121
 CCTGTGCAACCTCTGGATTCACTTTCAGTGACTATTACATGTATTGGGTTCGCCAGGCCC
                                                                  ATGTGAAGCTGGTGGAGTCTGGGGGGAGGCGTCGTGCAGCCCGGGGCGCTCCCTGAAACTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ccaagctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              94105-1492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Application US/08331397B
                                                                                                                                                                                                                                                                                                                                                                     738 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               E: Townsend and Townsend and Crew 
One Market Plaza, Steuart Street
                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                        (415) 543-5043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Benhar,
                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pastan,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28-OCT-1994
                                                                                                                                                                                                                                                                                                                                      single
                                                                                                                                               47.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chimeric and Mutationally Stabilized Tumor-
Specific Antibody Fragments, Fusion Proteins, and
Thereof
                                                                                                                                                                                                                                      /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         38,498
                                                                                                                                 0;
                                                                                                                                 Score 349; DB Pred. No. 9.9e 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           015280-126120US
                                                                                                                                                                                                                                      "Humanized B3 single-chain
                                                                                                                                 DB 2; 1
).9e-94;
les 225;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Plaze
                                                                                                                                                                Length 738
                                                                                                                                  Indels
                                                                                                                                                                                                                                      F۷
                                                                                                                                  9
                                                                                                                                 Gaps
                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Uses
                                                                                                                                  ۳
```

```
RESULT 14
US-08-759-804A-31
                                                                                                                                                                                                                                                                         GENERAL INFORMATION:

APPLICANT: Pastan, Ira
APPLICANT: Willingham, Mark
APPLICANT: FitzGerald, David
APPLICANT: Brinkmann, Ulrich
APPLICANT: Pai, Lee
                                                                                                                                                                                                                                                                                                                                                                   Sequence 31, Patent No. 5
                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                              TITLE OF INVENTION: TUMOR'S
TITLE OF INVENTION: Fusion
NUMBER OF SEQUENCES: 68
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         182
                                                                                                                                    STREET:
CITY: Sa
STATE: C
COUNTRY:
APPLICATION NUMBER: FILING DATE: 03-DEC
                                                                                                                                                                                                 ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ctccactcactttgtcggttaccattggacaaccagcctccatctctttgcaagtcaagtc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gaggcggttcaggcggaggtggctctggcggttggcggatcggatgttttgatgacccaaa 412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tttacggggatgctttggactattggggccaagggaccacggtcaccgtctcctcaggtg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ctgaacagggcctggagtggattggattgatcctgagaatggtgatactgaatatg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ccaagctggaaatcaaa 729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            atttgggagtttattattgctggcaaggtacacattctccgctcacgttcggtgctggca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   agtotocaaagogootaatotatotggtgtotaaactggactotggagtocotgacaggt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGATCATTGTACATAGTAATGGAAACACCTATTTAGAATGGTACCTGCAGAAACCAGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                agagcctcttggatagtgatggaaagacatatttgaatttggttgttacagaggcccaggcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTCCATTGAGTTTACCTGTCACCCCGGGAGAGCCGGCCTCCATCTCTTGCAGATCTAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGGCGGATCCGGTGGCGGATCTGGAGGTGGCGGAAGCGATGTGCTGATGACCCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCTGGGGAGCCTGGTTTGCTTACTGGGGCCCAAGGGACTCTGGTCACTGTCTCCTCAGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGACACTGTAAAGGGCCGGTTCACCATCTCTAGAGAACAATAGCAAGAACACCCTCTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctacc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACGTCGGAGTTTATTACTGCTTTCAAGGTTCACATGTTCCATTCACGTTCGGCCAGGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCAGTGGCAGTGGATCAGGGACAGATTTCACACTCAAGATCAGCAGAGTGGAGGCTGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGTCTCCACAGCTGCTGATCTACAAAGTTTCCAACCGATTTTCTGGGGTCCCAGACAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGCAAATGAACCGTCTGCGCGCGAGGACACAGCCATATATTCCTGTGCAAGAGGACTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGGCAAGGGCCTGGAGTGGGTCGCATACATTAGTAATGATGATAGTTCCGCCGCTTATT
                                                                                                                                                   ESSEE: Townsend and I
ET: Two Embarcadero C
: San Francisco
E: California
                                                                                                                         94111-3834
                                                                                                                                                                                                                                                                                                                                                                    1, Application US/08759804A 5990296
                                                                                                                                                                                                                                                                           Brinkmann, Ulrich
Pai, Lee
 03-DEC-1996
                                                                                                                                                                                                                                                         Tumor-Specific Antibody Fragments
                US/08/759,804A
                                                                                                                                                                                                                                                                                                        David
                                                                                                                                                                                Townsend and Crew LLP Center, Eighth Floor
                                                                                                                                                                                                                                                                                                        ٦.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                    밁
                                                                        Qy.
                                                                                                                                                                                                δõ
                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                 V.O
                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                    Q
                                                                                                                                                                                                                                                                                                                                                                                 ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                   362
                533
                                            482
                                                                         473
                                                                                                                           413
                                                                                                                                                                                                353
                                                                                                                                                                                                                                302
                                                                                                                                                                                                                                                                                         242
                                                                                                                                                                                                                                                                                                                      242
                                                                                                                                                                                                                                                                                                                                                      182
                                                                                                                                                                                                                                                                                                                                                                                   182
                                                                                                                                                                                                                                                                                                                                                                                                                 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N
```

Š 밁 Š 밁 Qy 밁 ρ В Ş g 20 В

ρ В Ş В

Ş g Š

멍 Š

```
REFERENCE/DOCKET NUMBER: 32,762
REFERENCE/DOCKET NUMBER: 01528
FELECOMMUNICATION INFORMATION:
FELEPHONE: (415) 576-0200
FELEFAX: (415) 576-0300
INFORMATION FOR SEQ ID NO: 31:
SEQUENCE CHARACTERISTICS:
LENGTH: 738 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 503; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE: FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 30-SEP-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 28-OCT-
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 12-OCT-1990 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                             293 tttacggggatgcttttggactattggggccaagggaccacggtcaccgtctcctcaggtg
                                                                                                                                                          422 CTCCATTGAGTTTACCTGTCACCCCGGGAGAGCCGGCCTCCATCTCTTGCAGATCTAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY:
LOCATION: 1..738
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US 0 FILING DATE: 28-OCT-1994
agtotocaaagogocotaatotatotggtgtotaaaotggactotggagtocotgacaggt
                                                                                         agagcctcttggatagtgatggaaagacatatttgaattggttgttacagaggccaggcc 532
                                                                                                                                                                                    ctccactcactttgtcggttaccattggacaaccagcctccatctcttgcaagtcaagtc
                                                                                                                                                                                                                                                 GAGGCGGATCCGGTGGTGGCGGATCTGGAGGTGGCGGAAGCGATGTGCTGATGACCCAGT
                                                                                                                                                                                                                                                                              gaggcggttcaggcggaggtggctctggcggtggcggatcggatgttttgatgacccaaa 412
                                                                                                                                                                                                                                                                                                                                      CCTGGGGAGCCTGGTTTGCTTACTGGGGCCCAAGGGACTCTGGTCACTGTCTCCTCAGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                    tgcagctcagcagcctggcatctgaggacactgccgtctattattgt-----aatt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGACACTGTAAAAGGGCCGGTTCACCATCTCTAGAGACAACAAGAAACACCCTCTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGGCAAGGGCCTGGAGTGGGTCGCATACATTAGTAATGATGATAGTTCCGCCGCTTATT 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCTGTGCAACCTCTGGATTCACTTTCAGTGACTATTACATGTATTGGGTTCGCCAGGCCC 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGTGAAGCTGGTGGAGTCTGGGGGGGGGGGCGTCGTGCAGCCCGGGGCGCTCCCTGAAACTCT 61
                                                                 AGATCATTGTACATAGTAATGGAAACACCTATTTAGAATGGTACCTGCAGAAACCAGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                               TGCAAATGAA3CGTCTGCGCGCGAGGACACAGCCATATATTCCTGTGCAAGAGGACTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Weber, Ellen L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12-OCT-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         47.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US 07/596, 289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US 07/767,331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 08/331,398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                015280-126140US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 349; DB 2; Length 7; Pred. No. 9.9e-94; O; Mismatches 225; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Humanized
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B3 single-chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
```

۳.

352

301 292 241

361

481 472 421

592 541

```
; NAME/KEY:
; LOCATION:
US-08-279-772A-7
 밁
                            Š
                                                          В
                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 15
US-08-279-772A-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                    Query Match 47.7%;
Best Local Similarity 68.8%;
Matches 501; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 7, Application US/08279772A Patent No. 6080560
                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Seay, Nicholas J.
REGISTRATION NUMBER: 27,386
REFERENCE/DOCKET NUMBER: 11-2
TELECOMMUNICATION INFORMATION:
TELEPHONE: 608-251-5000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                 TELEFAX: 608-251-9166 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Fuller, James T
TITLE OF INVENTION: Method for Producing Antibodies in Plant
TITLE OF INVENTION: Cells
                                                                                                                                                                                                                                                         MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               542
67
                               61
                                                                                                                                                                                                                                                                         TOPOLOGY: lir
                                                                                                                                                                                                                                                                                             TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY: United ZIP: 53701-2113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: Madison
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
                                                        teetgeacagettetggetteaacattaaagaetaetatatgeactgggtgaageagagg 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ccaagctggaaatcaaa 729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           atttgggagtttattattgctggcaaggtacacattctccgctcacgttcggtgctggca 712
 TCCTGCAAGGCTTCTGGCTACACCTTTACTAGCTACAGGATGCACTGGGTAAAACAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCAAGGTCGAAATTAAA 738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACGTCGGAGTTTATTACTGCTTTCAAGGTTCACATGTTCCATTCACGTTCGGCCAGGGTA 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCAGTGGCAGTGGATCAGGGACAGATTTCACACTCAAGATCAGCAGAGTGGAGGCTGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGTCTCCACAGCTGCTGATCTACAAAGTTTCCAACCGATTTTCTGGGGTCCCAGACAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  E: Quarles and Brady
PO Box 2113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          United States
                                                                                                                                                                                                             CDS
1..719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Russell,
                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                       DNA (genomic)
                                                                                                                                                                                                                                                                                       double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            David R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US/08/279,772A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of
                                                                                                                  Score 347.6; DB 3;
Pred. No. 2.5e-93;
0; Mismatches 209;
                                                                                                                                                                                                                                                                                                                                                                                                              L1-229-9097-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           America
                                                                                                                                                 Length
                                                                                                                    Indels
                                                                                                                                                 719;
                                                                                                                18;
                                                                                                                    Gaps
 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               601
                                                                                                                    ļ.
```

```
B
                                                                Ω
                                                                                      밁
                                                                                                          δÃ
                                                                                                                                                         δõ
                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                  δõ
                                                                                                                                   뭕
                                                                                                                                                                                 밁
                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                           649
                                                                 661
                                                                                       589
                                                                                                            601
                                                                                                                                   529
                                                                                                                                                          541
                                                                                                                                                                               487
                                                                                                                                                                                                     481
                                                                                                                                                                                                                            427
                                                                                                                                                                                                                                                 421
                                                                                                                                                                                                                                                                        367
                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                      307
                                                                                                                                                                                                                                                                                                                                                                                                             187
                                                                                                                                                                                                                                                                                                                                                                                                                                  181
709
                    721
                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                   247
                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                           127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
             gaaatcaa 728
                                                                                      aagcgcctaatctatctggtgtctaaactggactctggagtccctgacaggttcactggc
                                                                                                                                                                                              ttggatagtgatggaaagacatatttgaattggttgttacagaggccaggccagtctcca
                                                                                                                                                                                                                                                                                    ATCAGAAGTTCAAGGACAAGGCCACATTGACTGCAGACAAATCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                        gccccgaagttccagggcaaggccactatgactgcagacacatcctccaatacagcctac 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGCTCAA 716
                                           ACTTATTACTGCCATCAAAGGAGTACTTACCCACTCACGTTCGGTTCTGGGACCAAGCTG
                                                         gtttattattgctggcaaggtacacattctccgctcacgttcggtgctggcaccaagctg
                                                                                                                                                                                                                                            actttgtcgg:taccattggacaaccagcctccatctcttgcaagtcaagtcagagcctc
                                                                                                                                                                                                                                                                                                                                                                   ATGCAACTGAGCCTGACATTTGAGGACTCTGCAGTCTATTACTGTGCAAGAGGGGGG
                                                                                                                                     AAACTCTGGATTTATACCACATCCAACCTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGC
                                                                                                                                                                               -------AGTTACATGCACTGGTTCCAGCAGAAGCCAGGCACTTCTCCC
                                                                                                                                                                                                                                                                        TCGGGCGGTGGCGGCTCGGGTGGCGGCTCTCAAATTGTTCTCACCCAGTCTCCAGCA 426
                                                                                                                                                                                                                                                                                                                      GGGGTCTTTGACTACTGGGGCCCAAGGAACCACTCTCACAGTCTCCTCCGGAGGCGGTGGC
                                                                                                                                                                                                                                                                                                                                gatgctttggactattggggccaagggaccacggtcaccgtctcctcaggtggaggcggt
                                                                                                                                                                                                                            ATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATAACCTGCAGTGCCAGCTCAAGTATA
                                                                                       648
                                                                                                                                                                                                      540
                                                                                                                                                                                                                            486
                                                                                                                                                                                                                                                   480
                                                                                                                                                                                                                                                                                               420
                                           708
                                                                 720
                                                                                                             660
                                                                                                                                                          600
                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                             246
                                                                                                                                     588
                                                                                                                                                                                 528
                                                                                                                                                                                                                                                                                                                      366
                                                                                                                                                                                                                                                                                                                                           360
                                                                                                                                                                                                                                                                                                                                                                   306
```

Search completed: February 17, 2001, 22:59:21 Job time: 35112 sec

ì

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence:
       Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
       Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PIR_66:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query
     BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-297-181-2
1289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    195891 segs, 67900655 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 QVQLQQSGAELVRSGASVKL.....CWQGTHSPLTFGAGTKLEIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             February 12, 2001, 15:22:50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
       DВ
     341374

375324

37532513

37532513

37532513

3753491

3355491

3455491

3455491

3455491

3455491

345749

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

3457491

345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              622.401 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Search time 26.51 Seconds (without alignments)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      195891
Ig heavy chain pre proteolytic antibo ig kappa chain V r Ig heavy chain V r Ig heavy chain V r Ig kappa chain V r Ig heavy chain V r Ig gamma chain V r Ig gamma-1 chain V r Ig gamma-1 chain V r Ig gamma chain V r Ig kappa chain V r
                                                                                                                                                                                                                                                                                                                                                                                                       19
19
19
                                                                                                                                                                                                                                                                                                                                                                                                                                                            single chain Fv an
p53 specific singl
Ig heavy chain V r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Description
                                                                                                                                                                                                                                                                                                                                                                                                                         kappa chain pre
kappa chain V r
```

45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30
447	449	450	451	453	458.5	460	460.5	461	462	463	464.5	465	468.5	469	469
34.7	34.8	34.9	35.0	35.1	35.6	35.7	35.7	35.8	35.8	35.9	36.0	36.1	36.3	36.4	36.4
112	132	115	131	122	114	112	114	133	114	118	144	103	140	133	91
N	N	N	N	N	N	N	ຎ	ب	4	N	N	N	2	ш	2
S38719	S40322	S38715	в39276	S40338	S49572	A31807	B49002	A24452	A47271	S40374	B30502	PH1056	S22658	K2HURP	S42186
					٠										
Ig	Ιg	Ig	Ιg	Ξg	Ig	Ιg	Ιg	Ιg	٠.	Ιg	Ιg	Ιg	Ιg	Ιg	Ιg
light	kappa	kappa	light	kappa	kappa	kappa	kappa	kappa	crophe	kappa	heavy	light	kappa	kappa	kappa
chain	chain	chain	chain	chain	chain	chain		chain	ny1	chain	chain	chain	chain	chain	chain
۷r	, H	٧ ۲	pre	۔ ت	pre	٧ ۲	٧r	pre	ndson	ה ב	۷r	Vr	pre	pre	۷r
	34.7 112 2	34.8 132 34.7 112	450 34.9 115 2 449 34.8 132 2 447 34.7 112 2	451 35.0 131 2 450 34.9 115 2 449 34.8 132 2 447 34.7 112 2	453 35.1 122 2 451 35.0 131 2 450 34.9 115 2 449 34.8 132 2 447 34.7 112 2	458.5 35.6 114 2 \$49572 Ig kappa chain 453 35.1 122 2 \$40338 Ig kappa chain 451 35.0 131 2 B39276 Ig light chain 450 34.9 115 2 \$38715 Ig kappa chain 19 kappa chain 449 34.8 132 2 \$40322 Ig kappa chain 19 kappa chain	460 35.7 112 2 A31807 II kappa chain 458.5 35.6 114 2 S49572 II kappa chain 458.3 35.1 122 2 S40338 II kappa chain 12 2 S40338 II kappa chain 12 2 S40338 II light chain 13 2 B39276 II light chain 1450 34.9 115 2 S38715 II kappa chain 1470 34.8 132 2 S40322 II kappa chain 1470 34.7 112 2 S38719 II light chain 15 light chain 15 S40322 II kappa chain 16 S40324 II light chain 17 S40324 II light chain 18 S40324 II light ch	460.5 35.7 114 2 B49002 Ig kappa chain 460 35.7 112 2 A31807 Ig kappa chain 458.5 35.6 114 2 S49572 Ig kappa chain 453 35.1 122 2 S40338 Ig kappa chain 1g kappa chain 35.0 131 2 B39276 Ig kappa chain 450 34.9 115 2 S38715 Ig kappa chain 449 34.8 132 2 S38719 Ig kappa chain 1g	461 35.8 133 1 A24452 Ig kappa chain 460.5 35.7 112 2 B49002 Ig kappa chain 460.5 35.7 112 2 A31807 Ig kappa chain 458.5 35.6 114 2 S49572 Ig kappa chain 12 S49572 Ig kappa chain 12 S40338 Ig kappa chain 12 S40338 Ig kappa chain 12 S40338 Ig kappa chain 12 S40315 Ig kappa chain 12 S40315 Ig kappa chain 12 S38715 Ig kappa chain 12 S38715 Ig kappa chain 13 S40322 Ig kappa chain 13 S40323 Ig kappa chain 14 S40323 Ig kappa chain 15 S40323 Ig kapp	462 35.8 114 4 A47271 nitrophenyl phonyl 461 35.8 13.8 1 A24452 Ig kappa chain 460.5 35.7 114 2 B49002 Ig kappa chain 460 35.7 112 2 A31807 Ig kappa chain 458.5 35.6 114 2 S49572 Ig kappa chain 458.5 35.1 122 2 S40338 Ig kappa chain 451 35.0 131 2 B39276 Ig kappa chain 12 12 S40372 Ig kappa chain 450 34.9 132 2 S40327 Ig kappa chain 449 34.8 132 2 S40322 Ig kappa chain 12 Ight chain 447 34.7 112 2 S38719 Ig kappa chain 13 Ight chain 13 Ight chain 147 34.7 112 2 S38719 Ig kappa chain 147 34.7 Ig kappa chain 147 34.7 Ig kappa	463 35.9 118 2 S40374 Ig kappa chain 462 35.8 114 4 A47271 Ig kappa chain 461 35.8 133 1 A24452 Ig kappa chain 460.5 35.7 114 2 B49002 Ig kappa chain 460.5 35.7 112 2 A31807 Ig kappa chain 458.5 35.6 114 2 S49572 Ig kappa chain 458.5 35.6 114 2 S49572 Ig kappa chain 18 S5.0 112 2 S40338 Ig kappa chain 19 Ig S5.0 131 2 S40338 Ig kappa chain 19 Ig S5.0 131 2 S38715 Ig kappa chain 19 Ight chain 450 34.8 132 2 S40332 Ig kappa chain 19 Ight chain 19 I	464.5 36.0 144 2 B30502 Ig heavy chain 463 35.8 114 4 A47271 Ig kappa chain 462 35.8 114 4 A47271 nitrophenyl phe 461 35.8 13 1 A24452 Ig kappa chain 460.5 35.7 114 2 B49002 Ig kappa chain 460.5 35.7 114 2 A31807 Ig kappa chain 488.5 35.6 114 2 A31807 Ig kappa chain 458.5 35.6 114 2 S49572 Ig kappa chain 453 35.1 122 2 S40338 Ig kappa chain 19 kappa chain 451 35.0 131 2 B39276 Ig kappa chain 450 34.8 132 2 S40338 Ig light chain 449 34.8 132 2 S40329 Ig kappa chain 19 kappa chain 447 34.7 112 2 S38719 Ig kappa chain 19 kappa c	465 36.1 103 2 PH1056 464.5 36.0 144 2 B30502 Ig heavy chain 463 35.9 118 2 S40374 Ig kappa chain 462 35.8 114 4 A47271 461 35.8 114 4 A47271 Ig kappa chain 461 35.7 114 2 B4902 Ig kappa chain 460.5 35.7 114 2 B4902 Ig kappa chain 458.5 35.6 114 2 S49572 Ig kappa chain 459.3 35.1 122 2 S49338 Ig kappa chain 450 34.9 131 2 B39276 Ig kappa chain 450 34.9 132 2 S40322 Ig kappa chain 447 34.7 112 2 S38715 Ig kappa chain 450 34.8 132 2 S40322 Ig kappa chain 450 34.8 132 2 S40320 Ig kappa chain 450 34.8 132 2 S40320 Ig kappa chain 450 34.8 132 2 S40320 Ig kappa chain	468.5 36.3 140 2.522658 Ig light chain 465 36.1 103 2 PH1056 Ig light chain 464.5 36.0 144 2 B30502 Ig heavy chain 463 35.9 118 2 S40374 Ig kappa chain 462 35.8 114 4 A47271 Ig kappa chain 461 35.8 113 1 A24452 Ig kappa chain 460.5 35.7 114 2 B49002 Ig kappa chain 19 kappa chain 460.5 35.7 112 2 A31807 Ig kappa chain 458.5 35.6 114 2 S49572 Ig kappa chain 458.5 35.6 114 2 S49572 Ig kappa chain 458.3 35.1 122 2 S40328 Ig kappa chain 19 light chain 449 34.8 132 2 S40329 Ig kappa chain 19 light chain 447 34.7 112 2 S38719 Ig kappa chain 19 light 19 light chain 19 light 19 light chain 19 light light light light 19 light light 19 light light light 19 light light light light 19 light light light light 19 light lig	K2HURP K2HURP K2HURP II kappa chain PH1056 II light chain B30502 II heavy chain S40374 II kappa chain A47271 A24452 II kappa chain B49002 A24452 II kappa chain II kappa chain A31807 II kappa chain A31807 II kappa chain A31807 II kappa chain S40572 II kappa chain S4038 II kappa chain

## ALIGNMENTS

, `						
	Y		• .			
R;Jannot, C.B.; Hynes, N.E. Biochem: Biophys. Res. Commun. 230, 242-246, 1997 A;Title: Characterization of scFV-421, a single-chain antibody targeted to p55. A;Reference number: JC5322; MUID:97168950	TRESULT 2  JC53322  p53 specific single-chain antibody Pab421 - human  C;Species: Homo sapiens (man)  C;Date: 15-May-1997 #sequence_revision 15-May-1997 #text_change 18-Jul-1997  C;Accession: JC5322 .	Qy 177 GQSPKRLIXLVSKLDSGVPDRPTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGA 236     :   :    :  :  :  :  :  :  :  :  :	Qy 61 APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCNFYGDALDYWGQGTTVTVSS 116	Query Match Query	tion and functional characterization of the control	Ev antibody - mouse us musculus (house mouse) an-1995 #sequence_revision 06-Jan-1995 841374

```
Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C;Date: 19-Jan-1996 *sequence_revision 19-Jan-1996 *text_ch C;Accession: A56446 R;Tang, P. M.; Foltz, L.A.; Mahoney, W.C.; Schueler, P.A. J. Biol. Chem. 270, 7829-7835, 1995 A;Title: A high affinity digoxin-binding protein displayed A:Reference number: A56446; MUID:95229583
В
                            δÃ
                                                                 В
                                                                                               δÃ
                                                                                                                                   В
                                                                                                                                                                                                    В
                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: mRNA
A; Residues: 1-268 <TAN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                J heavy chain V region (3H-3H scFv) - mouse (strain BALB/C)
Species: Mus musculus (house mouse)
Date: 19-Jan-1996 #sequence_revision 19-Jan-1996 #text_cha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Comment: This protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;Molecule type: mRNA
;Residues: 1-233 <JAN>
;Experimental source:
                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                           Cross-references: GB:U20617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
237
                                                                                                                                                                    119
                                 239
                                                                 177
                                                                                                                                    123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          185 YLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGTKLEI 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          125
                                                                                                                                                                                                      63
                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 GVKATMTADTSSNTAYLQLSSLTSEDTAVYYCN---AGMDYWGQGTTVTVSSGGGGSGGR 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          65
                                                                                                                                                                                                                                                                         ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ű
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GSGGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQSPKRLI 184
                               KLEIK 243
                                                                                                                                                                   GGSGGGGSGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQ 178
                                                                                                                                                                                                    DPKFQGKATIAADTSSNTAYLQLSSLTSEDTAVYYCASYYLTRYENYWGQGTTVTVSSGG
                                                                                                                                                                                                                        APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYC-NFYGDALD-YWGQGTTVTVSSGG 118
                                                                                                                                                                                                                                                                                           QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY
KLEIK
                                                                 SPKLWVYYTSHLPPGVPARFSGSGSGNSYSLTISSMEGEDAATYYCQQFTSSPFTFGSGT
                                                                                               SPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGT 238
                                                                                                                                   GGSGGGDSGGGGSDIELTQSPAIMSASLGEKVTMSCRASSSV-----NFIYWYQQKSDA 176
                                                                                                                                                                                                                                                                        QVKLQESGAELVKPGASVKLSCTTSGFNIKDTYMHWVKQRPEQGLEWIGRIAPANGITKY 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     YLVSNLESGVPARFSGSGSGTDFTLNIHPVEEEDAATYYC-QHIRELTRSEGGTKLEI 233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QGKATMTADTSSNTAYLQLSSLASEDTAVYYCNFYGDALDYWGQGTTVTVSSGGGGSGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEYAPKF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ASGGGGSDIELTQSPASLAVSLGQRATISCRASKS-VSTSGYSYMHWNQQKPGQPPRLLI 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QESGAELVRSGASVKLSCTTSGFNINDYYMHWVKKRPEQGLEWIGRIDPENGDADMTRSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                164;
                                                                                                                                                                                                                                                                                                                                                                                                                           heterotetramer; immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity 68.9
54; Conservative
                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              hydricloma cell
n specifically b
                                                                                                                                                                                                                                                                                                                                                       63.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           64.6%;
                                                                                                                                                                                                                                                                                                                                         30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25;
                                                                                                                                                                                                                                                                                                                                       Score 815; DB 2;
Pred. No. 3.2e-51;
0; Mismatches 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 832.5;
Pred. No. 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ed. No. 1.5e-52;
Mismatches 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              binds the tumor suppressor protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB
                                                                                                                                                                                                                                                                                                                                         49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2;
                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                M13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16-Aug-1996
                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                is functionally ident
                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                               236
                                                                                                                                                                                                    122
                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                p53.
                                                                                                                                                                                                                                                                                                                                         ω,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ιt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                restore
```

RESULT C32513

4

murine

response:

```
Ig kappa chain precursor V region (BXW14) -C; Species: Mus musculus (house mouse) C; Date: 21-May-1900 #sequence_revision 31-D C; Accession: C32513 R. Kofler, R.; Strohal, R.; Balderas, R.S.; J. Clin. Invest. 82, 852-860, 1988 A; Title: Immunoglobulin kappa light chain v A; Reference number: A94689; MUID: 88331394
   R; Kofler, R.; Noon
Eur. J. Immunol. 1
A; Title: Molecular
                                                         Ig heavy chain precursor V region (MRL-histone 7H) c;Species: Mus musculus (house mouse) C;Date: 04-Dec-1992 *sequence_revision 04-Dec-1992 c;Accession: $04576
                                                                                                                                   RESULT
S04576
                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ig kappa chain V region (28.4.10A) - C;Species: Mus musculus (house mouse) C;Date: 23-Mar-1989 **sequence_revisio C;Accession: F30560
                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                  C;Superfamily: immunoglobulin V region; imm
C;Keywords: heterotetramer; immunoglobulin
F;16-95/Domain: immunoglobulin homology <II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Cross-references: (B:M20830; NID:g196939; C;Superfamily: immunoglobulin V region; immunoglobulin C;Keywords: heterotetramer; immunoglobulin F;36-115/Domain: immunoglobulin homology <IN
                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                       δð.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Cross-references: GB:M24273; NID:g197081; PIDN:AAA63370.1; PID:g197082 C;Superfamily: immunoglobulin V region; immunoglobulin homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: mRNA
A; Residues: 1-113 <MAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Reference number: A; Accession: F30560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      J. Immunol. 142, 863-870, 1989
A;Title: Variable region cDNA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R; Matsuda, T.; Kabat, E.A. J. Immunol. 142, 863-870,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: DNA
A; Residues: 1-132 KKOF>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Accession: C32513
                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       kappa chain precursor V region (BXW14) - mouse
                                                                                                                                                                                                                                                 192
                                                                                                                                                                                                                                                                                                                          132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     192 SGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGTKLEIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             132 DVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQSPKRLIYLVSKLD 191
                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21
                                                                                                                                             t o
                                                                                                                                                                                                                                  SGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGTKLEIK
                                                                                                                                                                                                                                                                                                       DVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQSPKRLIYLVSKLD 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DVVMTQIPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQSPKRLIYLVSKLD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SGVPDRFTGSGSGTDFTLKISRVEAEDLGVYYCWQGTHFPRTFGGGTKLEIK
                                                                                                                                                                                                                                                                                                                                                             106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                107;
                                    Noonan,
                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
an, D.J.; Strohal, R.;
7, 91-95, 1987
aralysis of the murin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   *sequence_revision
                                                                                                                                                                                                                                                                                                                                                                               42.9%;
94.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   43.48;
95.58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MUID:89110062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2
                                                                                                                                                                                                                                                                                                                                                                               Score 553;
Pred. No. 5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 560; DB 2;
Pred. No. 2.1e-33;
                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mouse (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23-Mar-1989 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31-Dec-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and
                                                                                                                                                                                                                                                                                                                                                                                                                                                        <MMI>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               immunoglobulin
                                        Balderas,
 lupus-associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           variable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Johnson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PIDN:AAA38844.1; PI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            antigen
                                                                                                                                                                                                                                                                                                                                                                             DB 2;
.5e-33;
                                                                                                                   - mouse
                                          R.S.;
                                                                           #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          binding specificity of mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .X
E3
                                                                                                                                                                                                                                                                                                                                                                                                Length 113;
                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                          Moller, N.P.H.; Dixon,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Noonan,
                                                                                                                   (fragment)
     anti-self
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PID:g196940
                                                                                                                                                                                                                                               243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           complex organization
                                                                               21-Jan-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21-Jan-2000
                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                D.J.; Duchosal,
                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          08
                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,
                                            F.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              onom
```

```
C;Accession: A36259
R;Zilber, B.; Scherf, T.; Levitt, M.; Anglister, J.
Biochemistry 29, 10032-10041, 1990
A;Title: NMR-derived model for a peptide-antibody complex.
A;Reference number: A36259; MUID:91104915
                                                                                                                                                                                                ig kappa chain V region (TE34) - mouse
C;Species: Mus musculus (house mouse)
C;Date: 18-Jan-1991 #sequence_revision 18-Jan-1991 #text_change 21-Jan-2000
                                                                                                                                                                                                                                                           RESULT
A36259
                                                                                                                                                                                                                                                                                                                                                                                     QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Residues: 1-112 <GAO>
A;Cross-references: GB:L34775
A;Note: authors translated the codon TAT for residue 37 as Thr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: EMBL:X14624; NID:g52029; PIDN:CAA32777.1; PID:g52030 C;Superfamily: immunoglobulin V region; immunoglobulin homology C:Keywords: heterotetramer; immunoglobulin C:Keywords: heterotetramer; immunoglobulin F:1-19/Domain: signal sequence #status predicted <SIG> F:20-136/Product: Ig heavy Chain V region (fragment) #status predicted <
                                                                            A; Reference number: A; Accession: A36259
                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Title: Molecular cloning of a proteolytic antibody light chain A;Reference number: A55491; MUID:95096089
A;Accession: A55491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   proteolytic antibody light chain - mouse
C;Species: Mus musculus (house mouse)
C;Date: 03-Mar-1995 #sequence_revision 03-Mar-1995 #text_change 21-Jan-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Reference number:
A;Accession: S04576
                     A; Molecule type: mRNA
A; Residues: 1-112 <ZIL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R;Gao, Q.S.; Sun,
J. Biol. Chem. 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C; Accession: A5549:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: mRNA
A;Cross-references: GB:M30458;
                                                         A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      F;34-117/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Residues:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        132
                                                                                                                                                                                                                                                                                                                                                                                     192 SGYPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGTKLEIK 243
                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                1 DVVMTQTPLTLSVTIGQPASISCKSSQSLLHTDGKTYLIWLLQRPGQSPKRLIYLVSKLD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY 60
                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                     DVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQSPKRLIYLVSKLD 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCNFYGD-ALDYWGQGTTVTVSS 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SGVPDRFTGSGSGTDFTLKISRVEAEDLGVYYCWQGTHFPQTFGGGTKLEIK 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ASKFQGKATMTADTSSNTTYLQLSSLTSEDTAVYYCTTYGAYAMDYWGQGTSVTVSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              104;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  104;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1-136 <KOF>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ın, M.; Tyutyulkova, S.
269, 32389-32393, 1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     42.3%;
88.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    42.0%;
92.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MUID:87133856
GB:M30459; GB:M30480; GB:M30481; GB:M30482; GB:M30483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 545.5;
Pred. No. 2.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 541; DB 2;
Pred. No. 3.9e-32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S.; Webster,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2.3e-32;
8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>ت</u>
;;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rees,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 112;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A.; Tramontano, A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AMAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Massey,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ø
```

```
C:Date: 201709 ;
(C:Date: 201709 ;
(R)Accession: S20709 ;
(R)Brennand, D.M.; Hinds, M.G.; Welsh, J.H.; Tempest, F.R., .....
R;Brennand, D.M.; Hinds, M.G.; Welsh, J.H.; Tempest, F.R., .....
Submitted to the EMBL Data Library, April 1992
                     C; Superfamily: immunoglobulin V region; im C; Keywords: heterotetramer; immunoglobulin
                                                                                                                                                      A; Title: Reshaping a human r
A; Reference number: 515672;
A; Accession: 515672
                                                                                                                                                                                                                       R; Tempest, P.R.; Bremner, P.; Lambert, M.; Taylor, Bio/Technology 9, 265-271, 1991
                                                                                                                                                                                                                                                                       Ig heavy chain V region - mouse (fragment)
C;Species: Mus musculus (house mouse)
C;Date: 18-Feb-1994 #sequence_revision 10-Nov-1995 #text_change 21-Jan-2000
C;Accession: S15672
                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Superfamily: immunoglobulin V region; imm C;Keywords: heterotetramer; immunoglobulin F;16-95/Domain: immunoglobulin homology <II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ig kappa chain V region - mouse
C;Species: Mus musculus (house mouse)
C;Date: 20-Feb-1995 #sequence_revision
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C;Superfamily: immunoglobulin V region; immunoglobulin C;Keywords: heterotetramer; immunoglobulin F;16-95/Domain: immunoglobulin.homology <IMM>
  F;15-98/Domain:
                                           A;Cross-references: EMBL«X58835; NID:g51978; PIDN:CAA41644.1; PID:g51979 C;Superfamily: immunoglobulin V region; immunoglobulin homology
                                                                                        A; Molecule type: mRNA
A; Residues: 1-116 <TEM>
                                                                                                                                     A; Status: preliminary; nucleic acid sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Cross-references: EMBL: Z11917; NID: g52655; PIDN: CAA77975.1; PID: g52656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: DNA A; Residues: 1-111 <BRE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       192 SGVPDRFTGS3SGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGTKLEI 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        132 DVLMTQTPLTL/SVT1GQPASISCKSSQSLLDSDGKTYLNWLLQRPGQSPKRLIYLVSKLD 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                            10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DVVMIQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQSPKRLIYLVSKLD
                                                                                                                                                                                                                                                                                                                                                                                                                                                               SGVPDRFTGSGSGTDFTLKISRVEAEDLGVYYCWQGTHFPQTFGGGTKLEI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SGVPTRFTGSGSGTDFTLKISRVEAEDGGVYYCWQGTHFPWTFGGGTKLEIK 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGTKLEIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  102;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     104;
immunoglobulin homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        · 41.7%;
91.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      41.8%;
92.9%;
                                                                                                                                                                                   monoclonal antibody to inhibit human ; MUID:91337412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 539; DB 2;
Pred. No. 5.4e-32;
2; Mismatches 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 537; DB 2; Pred. No. 7.5e-32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-Feb-1995 #text_change 21-Jan-2000
<IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ^IMN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              immunoglobulin homology
                                                                                                                                        not
                                                                                                                                        shown
                                                                                                                                                                                                                                                 G.; Furze, J.M.; Carr, F.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>ن</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 112;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 111
                                                                                                                                                                                                      respiratory syncytia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
```

Query Match Best Local Similarity

41.0%; 84.3%;

Score Pred.

528; DB 2; No. 3.4e-31;

Length 116

```
F:55-61/Region: complementarity-determining
F:62-93/Region: framework 3
F:94-102/Region· framework 3
                                                                                                                                                                                                                                                      C;Accession: $52445
R;Berdoz, J.; Krachenbuhl, J.P.
submitted to the EMBL Data Library, November 1994
A;Description: Specific amplification by the polymerase chain reaction of rearranged A;Reference number: $52445
A;Accession: $52445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         F;16-95/Domain: immunoglobulin homology <IM
F;24-39/Region: complementarity-determining
F;40-54/Region: framework 2
F;55-61/Region: framework 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R;Shlomchik, M.; Mascelli, M.; Shan, H.; Radic, M.Z.; Pisetsky, D.; Marshak-Rotl J. Exp. Med. 171, 265-297, 1990 A;Title: Anti-DNA antibodies from autoimmune mice arise by clonal expansion and A;Reference number: PLO231; MUID:90111618
                                                                                                                                                                                               A; Molecule type: DNA
A; Residues: 1-137 <BER>
                                                                                                                                                                                                                                                                                                                                                                       Ig heavy chain V region precursor - mouse
C:Species: Mus musculus (house mouse)
C:Date: 08-May-1995 #sequence_revision 21-Jul-1995 #text_change 21-Jan-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Molecule type: mRNA
A; Residues: 1-112 <SHL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Date: 16-Sep-1992 #sequence_revision 16-Sep-1992 #text_change 21-Jan-2000
C;Accession: PL0273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                       A; Introns: 16/1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 F;1-23/Region: framework
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C; Superfamily: immunoglobulin V region; immunoglobulin homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                            A;Cross-references: EMBL:X82690; NID:g673439; PIDN:CAA58011.1; PID:g673440
                                                                                                                                                                                                                                      A; Status:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Accession: PL0273
                                                                                              Superfamily: immunoglobul: Keywords: heterotetramer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g kappa chain V region (anti-DNA, D23VK) -;Species: Mus musculus (house mouse)
Query Match
Best Local :
                                                                       34 (115/Domain:
                                                                                                                                                       Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Keywords:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 103; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           94-102/Region: complementarity-determining 103-112/Region: framework 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                           12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGTKLEIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQSPKRLIYLVSKLD 191
                                                                                                                                                                                                                                   preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DVVMTQTPLTLSVTIGQPASISCKSSQSLLYRNGKTYLNWLLQRPGQSPKRLIYLVSKLD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCNFYGDALDYWGQGTTVTVSS 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEYA 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SGVPDRFTGSGSGTDFTLKISRVEAEDLGVYYCVQGTHFPWTFGGGTKLEIK 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PKFQGKATMTADTSSNTAYLQLTSLTFEDTAVYFCNSWGSDFDHWGQGTTVTVSS 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VQLQXSGTELERSGASVKLSCTASGFNIKDYYMHWMKQRPDQGLEWIGWIDPENDDVQYA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  97;
Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     heterotetramer;
                                                                                                                immunoglobulin V region;
                                                                         immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               40.98;
40.1%;
83.1%;
                                                                                                immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   immunoglobulin
                                                                           homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ω
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 527; DB 2;
Pred. No. 3.9e-31;
Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
517;
No. 2.
                                                                                                                   immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ^IMM>
                                                                           <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mouse (fragment)
DB 2;
.5e-30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 112;
                  Length 137;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Marshak-Rothstein,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        somatic
                                                                                                                                                                                                                                                                                               ger
```

```
A; Molecule type: mRNA
A; Residues: 7-120 <ROCI>
A; Cross-references: EMBL:X01820; NID:g51833; PIDN:CAA25962.1; PID:g1333983
A; Note: this sequence was determined from the differentiated gene
:R; Rocca-Serra, J.; Mazie, J.C.; Moinier, D.; Leclercq, L.; Somme, G.; Theze,
J. Immunol. 129, 2554-2558, 1992
A; Title: The limited diversity of the mouse gamma-chains anti-GAT repertoire
A; Reference number: $07453; MUID:83058021
A; A; Accession: $07453
A;Molecule type: protein
A;Residues: 1-43 <ROC2>
A;Residues: 1-43 <ROC2>
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Superfamily: immunoglobulin immunoglobulin
F;15-98/Domaan: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R:Lawler, A.M.; Kearney, J.F.; Kuehl, M.; Gearhart, P.J. Proc. Natl. Acad. Sci. U.S.A. 86, 6744-6747, 1989
A:Title: Early rearrangements of genes encoding murine immunoglobulin kappa-chains, A;Reference number: A33730; MUID:89367325
A;Accession: A33730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ig heavy chain V-D-J region (hybridoma G5 Bb 2.2) - mouse (fragment)
C;Species: Mus musculus (house mouse)
C;Date: 07-Sep-1990 #sequence_revision 07-Sep-1990 #text_change 20-Jun-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Superfamily: immunoglobulin V region; immun C;Keywords: heterotetramer; immunoglobulin F;16-95/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                      hypervariable regions. A; Reference number: $03471; A; Accession: $03471
                                                                                                                                                                                                                                                                                                                                                                                                                         A; Title: Analysis of antibody diversity: V-D-J mRNA nucleotide sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                   R;Rocca-Serra, J.; Matth
EMBO J. 2, 867-872, 1983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C; Accession: S03471; S07453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Cross-references: GB:M25996; NID:g197109; PIDN:AAA38911.1; PID:g197110 A;Note: the authors translated the codon CGC for residue 51 as Leu, and C;Superfamily: immunoglobulin V region; immunoglobulin homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: DNA
A; Residues: 1-101 <LAW>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C; Accession: A33730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ig kappa chain V region (1.60) - mouse
C;Species: Mus musculus (house mouse)
C;Date: 09-Mar-1990 #sequence_revision 18-Sep-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   132 DVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQSPKRLIYLVSKLD 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    192 SGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSP 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 APKFQGKATMTADISSNIAYLQLSSLASEDTAVYYCNFYGDA--LDYWGQGTTVTVSS 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 DVVMTQTPLTI.SVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQSPKRLIYLVSKLD 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SGVPDRFTGSGSGTDFTLKISRVEAEDLGVYYCWQGTHFP 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DPKFQGKASITADTSSNTAYLQLSSLASEDTAVYYCAYYGTSYWFPYWGQGTLVTVSA 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EVQLQQSGAELVRPGALVKLSCKASGFNIKDYYMYWVKQRPEQGLEWIGWIDPENGNTVY 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      l Similarity
97; Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               J.; Matthes, H.W.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  39.6%;
                                                                                                                                                                                                                                                                                                                                                                                MUID:84057768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               . œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kaartinen,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 511; DB 2;
Pred. No. 4.8e-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Milstein,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #text_change 21-Jan-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ი
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ن.
:
                                                                                                                                                                                                                                                                                                                                                                                                                              of four anti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fougereau,
                                                                                                                                                                                                                             ٠
;
                                                                                                                                                                                 does
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ۲
```

```
δÃ
Search completed: February 12, 2001, 15:25:01 Job time: 131 sec
                                                                                                                    δõ
                                                                                                                                                      망
                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                            K;Recinos, A.; Silvey, K.J.; Jensen, R.H.; Stanker, L.H.
submitted to the EMBL Data Library, January 1993
A;Description: Immunoglobulin variable heavy and light chain cDNA sequences for two anti A;Reference number: S31577
A;Accession: S31577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                             F;35-114/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                             A;Status: preliminary
A;Molecule type: mRNA
A;Molecule type: mRNA
A;Residues: 1-131 <REC>
A;Cross-references: EMBL:Z19575; NID:g53983; PIDN:CAA79627.1; PID:g53984
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ig kappa chain - mouse (fragment)
C;Species: Mus musculus (house mouse)
C;Date: 20-Feb-1995 #sequence_revision 20-Feb-1995 #text_change 21-Jan-2000
                                                                                                                                                                                                                         Ouery Match 39.5%;
Best Local Similarity 86.6%;
Matches 97; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EVQLQQSGAELVKPGASVKLSCTASGFNIKDTYMHWVKQRPEQGLEWIGRIDPANGNTKY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      39.5%;
                                                                                                                                                                                                                            6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 509.5; DB 2;
Pred. No. 7.4e-30;
                                                                                                                                                                                                                         Score 509; DB 2; Pred. No. 8.8e-30; 6; Mismatches 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10;
                                                                                                                                                                                                                                                           Length 131;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 120;
                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ω
••
                                                                                                                                                                                                                            0
                                                                                                                                                                                                                       Gaps ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ۲
```

Page

THIS PAGE DLAWK (USPTO)

4.40

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OM protein - protein search, using sw model
  3333098543321098
3321098543321098
                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
 Query
 SwissProt_39:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              88757 seqs, 32294092 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-297-181-2
1289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      February 12, 2001, 15:23:24; Search time 16.14 Seconds (without alignments)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QVQLQQSGAELVRSGASVKL.....CWQGTHSPLTFGAGTKLEIK
                                                                                                                                                                                                                                                                                                                                                                Length
 Вg
KY2C_HUMAN
HY12_MOUSE
HY1C_HUMAN
KY2C_MOUSE
KY2F_MOUSE
HY13_MOUSE
HY51_MOUSE
HY51_MOUSE
HY50_MOUSE
HY50_MOUSE
HY50_MOUSE
HY16_MOUSE
HY16_MOUSE
HY16_MOUSE
HY17_CANFA
KY3C_MOUSE
KY3L_MOUSE
HY09_MOUSE
KY3L_MOUSE
                                                                                                                                                                                                                                             KV2F_HUMAN
KV2B_HUMAN
KV2B_HUMAN
KV2B_HUMAN
KV2B_HUMAN
HV07_MOUSE
KV2A_HUMAN
HV07_MOUSE
HV11_MOUSE
HV11_MOUSE
                                                                                                                                                                                                                                                                                                                                                                Ä
                                                                                                                                                                                                                                                                                                                                                                                               SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         486.212 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                               Description
        o homo sapien
f homo sapien
f homo sapien
f homo sapien
f homo sapien
mus musculu
f homo sapien
mus musculu
f homo sapien
mus musculu
f homo sapien
f mus musculu
f homo sapien
f mus musculu
homo sapien
```

оу я	dd Gy	関合ひ	SQ	<b>5</b> 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	337		333	¥ R R	2 2 2 2	388	88	888	223	RARA	2888	SECTO	RESU KV2F ID AC					
18	128 17	Query M Best Lo Matches	SEQ	DIS	D D C		SIG	PFA	PIR	or	mod	Thi bet	Nuc	. MED	Euk Mam	15- 16-	ULT F_HUM F_KV2		43 44 45	410	38	4 2 7
8 SKLDSGV	ര – ഒ	Match Local Simi	TER UENCE 1	AIN AIN	AIN AIN	AIN	IN	M; PF0004 unoglobul	L; 200020	ities rec	by nor	s SWISS-I ween the Europear	leic Acid	UENCE FRO	aryota; N malia; E	JAN-1988 JAN-1988 JUL-1999 KAPPA CH <i>E</i>	AN F_HUMAN :		347.5 345.5	349.5	מומו	3 33 5 55 5 20 80
KLDSGVPDRFTGSGS	GGSDVLMTQTPLTLSVT	llarity Conser	133 133 AA;	114 123 43	875 83	44.	22,1	17; ig; lin v r	); CAA7 K2HUR	quires mail t	profi	PROT en Swiss Bioin	ls Res.	DM N.A. 11852; Mein hoglobu	Metazoa 1theria	(Rel. (Rel. (Rel. (NIN V-I	STA		27.0 27.0 27.0 26.8	177	777	17.7
SGSGTDF	TLSVTIG	36.4 76.7 Prvative	133	122 132 113	713 113	5 4 2 9 4	20 133	egion;	7315.1; P.	a licen o licen	t inst stateme	try is Instit formati	13:649	PubMed• dl A., lin kap	; Chord	06, Cre 06, Las 38, Las I REGIC	NDARD;		117	1111	117 117 111	117 117
- IF	TIGQPA  :		WM					Sig	.'	ISE@	itu	so. do	9-6	-299 Com	lata	za z		٠.,				
INRVEAEDL	SISCKSSQS:	Score 46 Pred. No 1; Misma	; 513CCA	COMPLEMENTARITY - FRAMEWORK 4. BY SIMILARITY.	COMPLEME	COMPLEME	IG KAPPA	nal.		agreement isb-sib.c	tions as is not re	yright. I of Bioin Institute	513(1985)	7711; briato G. light cha	; Craniat; ; Catarrh	d) equence unnotation pMI 6410	ESULT 1  VZE_HUMAN  D KVZE_HUMAN 5 STANDARD; PRT; 133 AA.  C P06310;	ALIGNMENTS	HV10_MOUSE HV52_MOUSE KV3H_MOUSE KV3I_MOUSE	KV3K_MOUS	HV1B_HUMA KV3U_MOUS	HV06_MOUS
GTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGTKLEIK	LLDSDGKTYLNWLLQRPGQSP  :                 LVYSDGNTYLNWFQQRPGQSP	9; DB 1; Length . 2.5e-29; tches 16; Indel	F3673009EE CRC64;	NTARITY-DETERMINING K 4.	N 2. NTARITY-DETERMINING K 3.	K 1. NTARITY-DETERMINING	CHAIN V-II REGION			(See http://www.h).	its cont Jsage by	duced are		, Solomon A., Zachau i in genes of subgroups	prata; Inidae;	pdate) update) PRECURSOR.	133 AA.	ENTS				
GTKLEIK	GQSPKRL:     :    GQSPRRL:	133; s 0		NG 3.	NG 2.	NG 1.	RPMI			isb-sib	ent is	ough a ne EMBL	:	1.G	Euteleost Homo.				P016327   P01660   P01661	125	73	0 8 0
243	PKRLIYLV 187  :       PRRLIYKV 76	; Gaps					6410.			.ch/annc	and for commercia	a collabor 3L outstat lctions on	,	.; and	tomi;				mus musculu mus musculu	mus musc	homo sapien	
		0;								ounce/	ercial	ollaboration outstation -	1						nlu nlu nlu	ulu	sapien sculu	culu culu

E.F.,

proteins

'n

BE IDEN

엵

IDENTICAL

(1, 2)

```
RESULT 2
KV2B_HUMAN
    RRRRRRRR RRCC OCCUPIT
                                                                                                                                                                                                                                                                    RESULT 3
KV2D_HUMAN
                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SO THE TERM OF THE PROPERTY OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
DOMAIN
                                                      primary amyloidosis."
                                                                                                                                                     Homo sapiens (Human)
Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      with specificity for phosphorylcholine Biochemistry 15:3829-3833(1976).
 SEQUENCE OF 1-27
MEDLINE=73166638;
                                                                 Putnam F.W., Whitley E.J. Jr., I
"Amino acid sequence of a kappa
                                                                                                MEDLINE-74148480;
                                                                                                               SEQUENCE (BENCE-JONES PROTEIN TEW).
                                                                                                                                           Mammalia;
                                                                                                                                                                                                 21-JUL-1986
15-JUL-1999
                                                                                                                                                                                                                                          P01617;
                                                                                                                                                                                                                                                       KV2D_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PFAM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Riesen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=76253627; PubMed=821524;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KV2B_HUMAN
P01615;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INTERPRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21-JUL-1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'Variable region sequence of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21-JUL-1986
5-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                           132 DVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQSPKRLIYLVSKLD
                                                                                                                                                                                                                                                                                                                                                        192
                                          ochemistry
                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           77
                                                                                                                                                                                                                                                                                                                                                                                  ш
                                                                                                                                                                                    KAPPA CHAIN V-II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KAPPA CHAIN V-II REGION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MACROGLOBULIN THAT BINDS PHOSPHORYLCHOLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MISCELLANEOUS: THIS
                                                                                                                                                                                                                                                                                                                                                                              DVVMTQSPLFLPVTLGEPASIQCRSSQSLVYRBGBTYLBWYLQKPGQSPELLIYLSSYRD
                                                                                                                                                                                                                                                                                                                                             SGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGTKLEIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A01886;
                                                                                                                                                                                                                                                                                                                            SGVPDRFSDSGSGTDFTLKITRVQAEDVGVYYCMQATZSPYTFGQGTKLZIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SNRDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCMQGTHWSWTFGQGTKVEIK 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PF00047; ig;
oalobulin V r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  W. F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                         Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              36; K2HUFR.
IPR003006; -.
                                                                                                                                                                                                 (Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1
24
40
55
62
94
103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (Rel.
(Rel.
(Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                       33.2%;
ilarity 71.4%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               113 AA;
                                          12:3763-3780(1973).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Jaton
                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7 region.
23
39
54
61
93
102
112
93
 (AMYLOID PROTEIN TEW). PubMed-4700495;
                                                                                                                                                                                                 01, Last
38, Last
                                                                                  PubMed=4596149;
ley E.J. Jr., Pa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01, Last
38, Last
                                                                                                                                                                                                                        01, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  J.-C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chordata;
Primates;
                                                                                                                                                                                  REGION
                                                                                                                                        Primates;
                                                                                                                                                     Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CHAIN WAS ISOLATED FROM A WALDENSTROM'S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MW;
                                                                                                                                                                                  annotation TEW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                annotation FR.
                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 428; DB 1;
Pred. No. 2.7e-26;
4; Mismatches 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPLEMENTARITY-DETERMINING FRAMEWORK 4.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPLEMENTARITY - DETERMINING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FRAMEWORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPLEMENTARITY-DETERMINING
                                                                                                                                        Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FRAMEWORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Craniata; Vertebrata; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                   Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OCODA39E46DB96BE CRC64;
                                                                      Bence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  light
                                                                                                                                                                                              on update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           on update)
                                                                                  a
                                                                                                                                                                                                                                                         113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     113
                                                                      Jones
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     chain
.";
                                                                                  Davidson
                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                   protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   from
                                                                                                                                                                                                                                                                                                                                                                                                                                          18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 113;
                                                                                    4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a Waldenstroms
                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                   .
Z
                                                                      from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Euteleostomi;
Homo.
                                                                      Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ۲
                                                                                                                                                                                                                                                                                                                             112
                                                                                                                                                                                                                                                                                                                                                      243
                                                                      case
                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                      of
                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IgM
                                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                              191
                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
KV2G_M
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 80
                                                                                                                                                                                                                                                                                                                                                      MOUSE

KV2G_MOUSE

P01631;

21-JUL-1986 (Rel. 01,

21-JUL-1986 (Rel. 01,

1999 (Rel. 31,

V-II
                                                                                                                                                                           MEDLINE-831/022, ... MAIGOILES M.N.; ROVOTHY J., MAIGOILES M.N.; RAMINO acid sequence of the light canti-digoxin hybridoma antibody."; Biochemistry 22:1153-1158(1983).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Terry W.D., Page D.L., Kimura S., Isobe T., Osserman L.r Glenner G.G.;

"Structural identity of Bence Jones and amyloid fibril p
patient with plusma cell dyscrasia and amyloidosis.";

J. Clin. Invest. 52:1276-1281(1973).

-i- MISCELLANEOUS: THE MAJOR AMYLOID PROTEIN APPEARS TO
MITH THE BENCE JONES PROTEIN ISOLATED FROM THE SAME
WITH THE BENCE JONES PROTEIN UNIC TROILATED FROM THE JUR
                                                                                  DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PIR;
DISULFID
              DOMAIN
                           DOMAIN
                                          DOMAIN
                                                      DOMAIN
                                                                                                                            PFAM:
                                                                                                                                                        PIR; A01914; KVMS26
                                                                                                                                                                                                                                                                                                                                         Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -!- MISCELLANEOUS: THIS PROTEIN WAS ISOLATED FROM THE URINE PATIENT WITH PLASMA CELL DYSCRASIA AND AMYLOIDOSIS.
-!- MISCELLANEOUS: THE C REGION OF THIS CHAIN HAS THE INV (1)
                                                                      DOMAIN
                                                                                                                                         INTERPRO;
                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                               Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DOMAIN
                                                                                                               [mmunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NIAMOC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INTERPRO; IPR003006; 
PFAM; PF00047; ig; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      132 DYLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQSPKRLIYLVSKLD 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            192 SGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGTKLEIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        \mapsto
                                                                                                                                                                    PROTEIN THAT BINDS DIGOXIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MARKER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A01888; K2HUTW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            80;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity 71.4
80; Conservative
                                                                                                                                         IPR003006; -.
                                                                                                                                                                                                                                                                                                             Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 113 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1
24
40
55
62
103
113
1
40
40
62
62
103
103
                                                                                                                . 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ν r
(5;
                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                   . 01, Creat
. 01, Last
. 38, Last
                                                                                                               region;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           region;
39
61
93
102
112
93
                                                                                                                                                                                                                                                                                                             Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23
39
54
61
93
                                                                                                                                                                                                                                                                                                                                                      REGION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           33.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12316
                                                                                                                                                                                                                                                                                                                                                                                               Created)
                                                                                                               Monoclonal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bence-Jones
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WW.
                                                                                                                                                                                                                                                                                                                                                     annotation update)
26-10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16;
           FRAMEWORK 1.
COMPLEMENTARITY-DETERMINING 1
FRAMEWORK 2.
COMPLEMENTARITY-DETERMINING 2
FRAMEWORK 3.
COMPLEMENTARITY-DETERMINING 3
FRAMEWORK 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FRAMEWORK 3.
COMPLEMENTARITY-DETERMINING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            e-Jones protein; FRAMEWORK 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FRAMEWORK 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPLEMENTARITY - DETERMINING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FRAMEWORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPLEMENTARITY-DETERMINING
                                                                                                                                                                                                                                                                                                            Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0C3C38F81F1843CA CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIMILARITY
                                                                                                                                                                                                                          chain
                                                                                                                                                                                  ISOLATED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           No.
                                                                                                             antibody;
                                                                                                                                                                                                                                                                                                                                                                                                                           113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2.7e-26;
                                                                                                                                                                                                                          variable
                                                                                                                                                                                                                                                                                                                                                                                                                           A
                                                                                                                                                                                  FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16;
                                                                                                            Hybridoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Amyloid
                                                                                                                                                                                  AN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                          region
```

Indels

0

Gaps

0

243

60

113

2

IGG2A HYBRIDOMA

from

a mouse

NONLTER

```
Ş
                                            В
                                                                                 δÃ
                                                                                                                                                                                                                                               STEP TO THE TERM REPORTED BEFORE THE TERM REPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SQ
                                                                                                                                                      Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          _HUMAN
KV2E_HUMAN
                                                                                                                                                                                                                                                                   DISULFID NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-JAN-1988 (Rel. 06, Created)
01-JAN-1988 (Rel. 06, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation update)
IG KAPPA CHAIN V-II REGION GM607 PRECURSOR (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                         DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the European Bioinformatics Institute. The use by non-profit institutions as for emoved. modified and this statement is not removed. entitles requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P06309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Immunoglobulin
NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PFAM; PF00047;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; Z00009; ~; NOT_ANNOTATED_CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Klobeck H.G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nature 309:73-76(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE-84191506; PubMed-6325927;
                                                                                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                        128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NTERPRO;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Clobeck H.G., Solomon A., Contribution of human V
  188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           132 DYLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQSPKRLIYLVSKLD 191
                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                            ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A01889; K2HUGM.
                                                                   GGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQSPKRLIYLV 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYYCWQGTHSPLTFGAGTKLEIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DVMTQTPLSLPVSLGDQASISCRSSQSLVHSNGNTYLNWYLQXAGQSPKLLIYKVSNRF 60
SKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGTKLEIK 243
                                         GSSGDIVMTQSPLSLPVTPGEPASISCRSSQSLLHSNGYNYLDWYLQKPQQSPQLLIYLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IPR003006; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     113
113 AA;
                                                                                                                                                                                                                                               117
117 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ig; 1.
ı V regi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       region;
                                                                                                                                                                                                                                                                                           117
27
43
58
65
97
106
116
                                                                                                                                                                                                                                               12664 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12273 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            33.2%;
                                                                                                                                                      32.8%;
69.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             kappa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Zachau H.G.;
                                                                                                                                 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 428; DB 1;
Pred. No. 2.7e-26;
                                                                                                                                                      Score 423; DB 1;
Pred. No. 6.7e-26;
                                                                                                                                                                                                                                                                                                                                                                                                   IG KAPPA CHAIN V-II REGION GM607. FRAMEWORK 1.
COMPLEMENTARITY-DETERMINING 1: FRAMEWORK 2.
                                                                                                                                                                                                                                                                                                                                                                              COMPLEMENTARITY-DETERMINING 2.
                                                                                                                                                                                                                                                                                                             COMPLEMENTARITY-DETERMINING FRAMEWORK 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ΙΙ
                                                                                                                                                                                                                                               92C57DC719E558B1 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     F9F39CE949A84C2A CRC64;
                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                        SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          germ-line
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        There are no restrictions ng as its content is in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             genes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Usage
                                                                                                                                                                           Length 117;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 113;
                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ៥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               light-chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     for
                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                            60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               č
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                          •
                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

```
RESULT
HV07_MC
                                                                                     밁
                                                                                                           γ
                                                                                                                                    밁
                                                                                                                                                          δÃ
                                     RESULT 7
KV2A_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                     Matches
           KV2A_HUMAN
P01614;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOUSE
                                                                                                                                                                                                                                                           DISULFID NON_TER
                                                                                                                                                                                                                                                                                                                       DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21-JUL-1986 (Rel: 01, Created)
21-JUL-1986 (Rel: 01, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation update)
IG HEAVY CHAIN V REGION B1-8/186-2 PRECURSOR.
                                                                                                                                                                                                                                                                                                                                               DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Heavy chain variable region contribution antibodies: somatic mutation evident
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HV07_MOUSE ST
P01751; P01752; +
21-JUL-1986 (Rel. 01, Created)
                                                                                                                                                                                                                                                                                                                                                                                    SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                              INTERPRO; IPR003006; PFAM; PF00047; ig; 1 Immunoglobulin V reg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a c
between the Swiss Institute of Bioinformatics and the EMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=81234548; PubMed=6788376; Bothwell A.L,M., Paskind M., Reth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN-C57BL/6;
MEDLINE-81234548;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa;
                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                           DOMAIN
                                                                                                                                                                                                                                                                                                                                                                       CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; J00529; AÄA38170.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    the European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Baltimore D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                             [mmunoglobulin
                                                                                     80
                                                                                                  61 APKEQGKATMTADTSSNTAYLQLSSLASEDTAVYYC---NFYGDA-LDYWGQGTTVTVSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20 QVQLQQPGAELVKPGASVKLSCKASGYTFTSYWMHWVKQRPGRGLEWIGRIDPNSGGTKY
                                                                                                                                                           Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MISCELLANEOUS: THE MAKING ANTIBODIES
                                                                                NEKFKSKATLTVDKPSSTAYMQLSSLTSEDSAVYYCARYDYYGSSYFDYWGQGTTLTVSS
                                                                                                                                                 QVQLQOSGAELVRSGASVKLSCTASGENIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY
                                                                                                                                                                                                                                                                                                                                                                                                                                  A02034;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (NPB ANTIBODIES).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24:625-637(1981)
                                                                                                                                                                                   81;
                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                               139
139
                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                   MHMS18
                                                                                                                                                                                                                                                                                                           869
869
                                                                                                                                                                                                                                               AA;
                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                              region; Signal.
                                                                                                                                                                                                                                                                                             111
124
124
124
124
                                                                                                                                                                                                                                               15419 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                 .'
                                                                                                                                                                                                32.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B1-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  THE
                                                                                                                                                                                     15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MU CHAIN
                                                                                                                                                                                  Score 423; DB 1;
Pred. No. 8.2e-26;
5; Mismatches 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 contribution
                                                                                                                                                                                                                                                                                             D SEGMENT
                                                                                                                                                                                                                                                                                                          FRAMEWORK 3.
                                                                                                                                                                                                                                                                                                                       COMPLEMENTARITY-DETERMINING
                                                                                                                                                                                                                                                                                                                                    FRAMEWORK
                                                                                                                                                                                                                                                                                                                                               COMPLEMENTARITY-DETERMINING 1.
                                                                                                                                                                                                                                                                                                                                                            FRAMEWORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Reth M., Imanishi-Kari T.,
                                                                                                                                                                                                                                                                                                                                                                       IG HEAVY CHAIN V REGION B1-8/186-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata; Sciurognathi; Muridae;
                                                                                                                                                                                                                                               1B57DD4FD0C9F465 CRC64;
                                                                                                                                                                                                                                                                        SIMILARITY
                                                                                                                                                                                                                                                                                    SEGMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WARNA WAS CLONED FROM A HYBRIDOMA (4-HYDROXY-3-NITROPHENYL) ACETYL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     139
                         115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      മ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    There are no restrictions
                         A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gamma
                                                                                                                                                                                     20;
                                                                                                                                                                                                         Length 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NPb family
                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     variable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Euteleostomi;
; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rajewsky K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a collaboration
                                                                                                                                                                                     4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     region.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                outstation
                                                                                                                                                                                   Gaps
                                                                                                           116
                                                                                                                                    79
                                                                                                                                                           60
```

2

```
SOUTH THE STATE OF THE STATE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SO DE PRESENTATION DE PRESENTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
      INTERPRO; IPR003006; -.
PFAM; PF00047; ig; 1.
Immunogiobulin V region; Antiarsonate antibody; Hybridoma.
Immunogiobulin V 120
INTERPRO; IPR003006; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  _MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-83131846; PubMed-6186498; Siekevitz M., Gefter M.L., Brodeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus (Mouse) 
Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last ser
15-JUL-1999 (Rel. 38, Last and
1G HEAVY CHAIN V REGION 36-65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HV03_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Immunoglobulin V region; Bence-Jones proter 1 24 95 BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21-JUL-1986 (Rel. 01, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation update)
IG KAPPA CHAIN V-II REGION CUM.
                                                                                                                                                                                                                                                                                                                                   "The genetic basis of antibody production: idiotype response of the strain A mouse."; Eur. J. Immunol. 12:1023-1032(1982).
                                                                                                                                                                                                                                                                                                                                                                                                                                      Marshak-Rothstein A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (Human)
Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Naturwissenschaften
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Molecular basis of antibody formation.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE-70063440;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REVISIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hoppe-Seyler's Z.
[2]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-68242259; PubMed-5586923;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ilschmann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  132 DVLMTQTPLTLSVTIGQPASISCKSSQSLLDS-DGKTYLNWLLQRPGQSPKRLIYLVSKL 190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N
                                                                                                                                                                                                                        MISCELLANEOUS: FROM ANALYSIS OF THE SIZES OF DIFFERENTIATED GENES THAT HYBRIDIZE TO THIS CONCLUDE THAT ALL OF THESE V REGIONS HAVE REF
                                                                                                                                                              SEGMENT, JH2.
A02028; HVMSG7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MISCELLANEOUS: THE C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGTKLEIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A01885; K2HUCM.
RPRO; IPR003006; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ASGVPDRFSGSGSGTDFTLKISRVQAEDVGVYYCMQRLEIPYTFGQGTKLEIR 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DIVMTQTPLSLPVTPGEPASISCRSSQSLLDSGDGNTYLNWYLQKAGQSPQLLIYTLSYR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TO 50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24
115
115 AA;
   120 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Physiol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PubMed-4188189;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    acid
   13307 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12676 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  32.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  96 AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Last sequence up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REGION OF THIS CHAIN HAS THE INVIS A BENCE-JONES PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Brodeur P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chem.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 418.5;
Pred. No. 1.5e
l3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
FF04E4A167B654AF CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     59E9F90A379569EC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   348:1718-1722(1967)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                on update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bence Jones protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Riblet R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .5e-25;
nes 17;
                                                                                                                                                                                                                               TO THIS ONE, THE HAVE REARRANGED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ጅ
                                                                                                                                                                                                                                                                                                                                                                                                 the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                 dominant anti-arsonate
                                                                                                                                                                                                                                                                                                SEVERAL OTHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                               THE AUTHORS
NGED TO THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cum (kappa-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (3) MARKER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                  4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ۲.
```

```
δõ
                         В
                                               Qy
                                                                                                                                                                               뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                           Query Match
Best Local S
Matches 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                       DISULFID NON_TER SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  _MOUSE STANDARD; PRT; 1
P01755;
21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence up
15-JUL-1999 (Rel. 38, Last annotation
16 HEAVY CHAIN Y REGION S43 PRECURSOR.
                                                                                                                                                                                                                                                                     SIGNAL
CHAIN
                                                                                                                                                                                                                                                                                                                                                                                 use by non-profit institutions as long as modified and this statement is not removed. U entities requires a license agreement (See htt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleosto
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                 DOMAIN
                                                                                                                                                                                                                                                                                               INTERPRO; IPRO03006; PFAM; PF00047; ig; 1 Immunoglobulin V reg
                                                                                                                                                                                                                                                                                                                                                                      or send an email to license agreement (S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              antibodies: somatic model 24:625-637(1981)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A. MEDLINE=81234548;
                                                                                                                                                                               DOMAIN
                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                        DOMAIN
                                                                                                                                                                                                                    DOMAIN
                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                                                                                                                                                 PIR; A02038;
                                                                                                                                                                                                                                                                                                                                              EMBL; J00539; AAA38172.1;
                                                                                                                                                                                                                                                                                                                                                                                                                       the European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                      between
                                                                                                                                                                                                                                                                                                                                                                                                                                                 This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Baltimore D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDIINE=81234548; PubMed=6788376; Bothwell A.L.M.; Paskind M., Reth M., Imanishi-Kari T.,
 61
                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 EKFKGKTTLTVDKSSSTAYMQLRSLTSEDSAVYFCARSVYYGGSYYFDYWGQGTTLTVSS 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                  Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MISCELLANEOUS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MISCELLANEOÙS: THE GAMMA-2A CHAIN MRNA WAS CLONED FROM A HYBRIDOMA MAKING ANTIBODIES TO THE HAPTEN (4-HYDROXY-3-NITROPHENYL)ACETYL
                                        QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY
                                                                                                                                                                                                                                                                                                                                                                                                                                  SWISS-PROT entry is copyright. It is produced through een the Swiss Institute of Bioinformatics and the EN
APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCNFY--GDALDYWGQGTTVTVSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (NPB ANTIBODIES).
                          QVQLQQPGAEFVKPGASVKLSCKASGYTFTSYLMHWVNQRPGRGLEWIGRIDPNSGGTTY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCN---FYGDA--LDYWGQGTTVTVSS 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEYA 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VQLQQSGAELVRAGSSVKMSCKASGYTFTSYGINWVKQRPGQGLEWIGYINPGNGYTKYN 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          chain variable region contribution dies: somatic mutation evident in a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 Similarity
78; Conserv
                                                                                    Similarity
                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                    G2MS43
                                                                                                                                                                                                        869500
                                                                                                                                                                                                                                                                                              region; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01, Created)
01, Last sequence update)
38, Last annotation update)
                                                                                                                                           15200
                                                                                     31.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31.5%;
65.0%;
                                                                                                                                           MW;
                                                                            10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18;
                                                                           Score 399; DB 1;
Pred. No. 5.3e-24;
0; Mismatches 28
                                                                                                                                                                  FRAMEWORK 3.
D SEGMENT.
JH2 SEGMENT.
BY SIMILARITY.
                                                                                                                                                                                                                    COMPLEMENTARITY-DETERMINING
                                                                                                                                                                                                                                 FRAMEWORK
                                                                                                                                                                                                                                             COMPLEMENTARITY - DETERMINING
                                                                                                                                                                                                                                                          FRAMEWORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 405.5; DB Pred. No. 1.5e-24
                                                                                                                                                                                                                                                                      IG HEAVY CHAIN V REGION
                                                                                                                                          ADD5881BF44B8EC9 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    137
                                                                                                                                                                                                                                                                                                                                                                                  (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                       There are no restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gamma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ۲.
                                                                                                                                                                                                                                                                                                                                                                                                            its content
                                                                                                  Length 137;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NPb
                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          variable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Euteleostomi;
                                                                                                                                                                                                                                                                      S43.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        family
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rajewsky
                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 a collaboration
                                                                            2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>ن</u>
                                                                                                                                                                                                                                                                                                                                                                                                  for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          region.";
                                                                                                                                                                                                                                                                                                                                                                                                                                      outstation
                                                                            Gaps
  116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                   60
                           79
                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                            o
                                                                                                                                                                                                                                                                                                                                                                                                            way
                                                                            1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N
```

```
RESULT
KV2C_HU
밁
                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                          RESULT 10
HV02_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                          밁
                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local :
                                                                                                                         _HUMAN
                      Eukaryota; Metazoa;
                                                         21-JUL-1986 (Rel.
21-JUL-1986 (Rel.
15-JUL-1999 (Rel.
                                                                                               KV2C_HUMAN
P01616;
                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                     CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                               SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                       PFAM; PF00047; ig; 1.
Immunoglobulin V region; Antiarsonate antibody; Hybridoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; J00493; AAA38128.1; PIR; A02028; HVMSG7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  between the Swiss Institute of Bioinf
the European Bioinformatics Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Science 216:309-311(1982).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Capra J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=82152818; PubMed=6801765; Sims J., Rabbitts T.H., Estess P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus (Mouse)
           Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                      NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Somatic mutation in
immunoglobulin heavy
                                               IG KAPPA CHAIN V-II REGION MIL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21-JUL-1986
L5-JUL-1999
                                                                                                                                                                                                  116
                                                                                                                                                                          140 S
                                                                                                                                                                                                                        80 NEKFKGKTTLTVDKSSSTAYMQLRSLTSEDSAVYFCARSHYYGGSYDFDYMGQGTPLTVS 139
                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                           20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   80 NEHFRSKATLTIDKPSSTAYMQLSSLTSEDSAVYYCARYRLGRYFDYWGQGTTLTVSS 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JUL-1986 (Rel. 01, Last sequence update)
-JUL-1999 (Rel. 38, Last annotation updat
HEAVY CHAIN V REGION 93G7 PRECURSOR.
                                                                                                                                                                                                ß
                                                                                                                                                                                                                                                                                                   QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOUSE
                                                                                                                                                                                                                                                 APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYC --- NFYGDA--LDYWGQGTTVTVS 115
                                                                                                                                                                                                                                                                           EVQLQQSGAELVRAGSSVKMSCKASGYTFTSYGINWVKQRPGQGLEWIGYINPGNGYINY
                                                                                                                                                                          140
                                                                                                                                                                                                116
                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .
. .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IPR003006; -.
                                                                                                                                                                                                                                                                                                                                                                                         140 AA;
                                                                                                                                                                                                                                                                                                                                                                                                        140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (Rel. 01, Created)
                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STANDARD;
                                                          01, Created)
01, Last sequences 38, Last annotations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    try is copyright. It is produced through a collaboration Institute of Bioinformatics and the EMBL outstation formatics Institute. There are no restrictions on its institutions as long as its content is in no way
           Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                         15514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                genes for chain.";
                                                                                                                                                                                                                                                                                                                                         30.8%;
                                                                                                                                                                                                                                                                                                                                                                                         MW;
                                                          sequence u
                                                                                                                                                                                                                                                                                                                              19;
                                                                                                                                                                                                                                                                                                                                         Score 397.5; DB 1
Pred. No. 7.1e-24;
                                                                                                                                                                                                                                                                                                                                                                                                                  ic
          Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                          25A4CBBE31DA5CE8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the variable
                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                  HEAVY CHAIN V REGION 93G7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Slaughter C.,
                                                         on update)
                                                                                                            112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 _update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (See http://www.isb-sib.ch/announce/
                                                                                                            ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             portion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Usage
                                                                                                                                                                                                                                                                                                                                                    1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tucker P.W.,
                                                                                                                                                                                                                                                                                                                                                    Length 140;
                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and
                                                                                                                                                                                                                                                                                                                             ر.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             for
                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                           79
                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                                                                             2
```

Ω

QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY 60

Query Match Best Local : Matches 7

Similarity

29.8%;

Conservative

Score Pred. 12; Mis

Mismatches

384.5; No. 5.6

.6e-23;

В

۲.

Length

117;

Indels

۳

Gaps

1 P

```
RESULT 12
HV12_MOUSE
                                                                       DI DE REPERTE DE COCCERTE DE REPERTE DE COCCERTE DE CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                             INTERPRO: 15, 1.
PEAM; PF00047; ig; 1.
PEAM; PF00041in V region; G
        CARBOHYD
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HV12_MOUSE P01756;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE-83075344; PubMed-6816276; Kehry M.R., Fuhrman J.S., Schilling Hood L'E.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence up
15-JUL-1999 (Rel. 38, Last annotation
IG HEAVY CHAIN V REGION MOPC 104E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DOMAIN
                                                                                                                                                                                                                               heavy chain constant region doma Biochemistry 21:5415-5424(1982).
                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                   Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PFAM; PF00047;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Dreyer W.J., Gtay W.R., Hood L.E.; "The genetic, molecular, and cellular basis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                ... MISCELLANEOUS:
                                                                                                                                                                                                                                                                         'Complete amino acid sequence of a mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    132 DVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQSPKRLIYLVSKLD 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                         PROTEIN HAS ALSO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SGVPNRFSGSSSGTBFTLKISRVZAZBVGVYYCMQALQTPLTFGGGTNVEIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGTKLEIK
                                                                                                                                                       A02039; MHMS4E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                 ; Metazoa;
Eutheria;
55.
117
117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IPR003006; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12,
2 AA;
      Ä,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ig; 1.
V region;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STANDARD;
                         55
117
                                                                                                                                                                      SO BEEN DETERMINED.
THIS PROTEIN BINDS DEXTRAN
                                                                                                                                                                                                            THE SEQUENCE OF THE LIGHT CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                 Chordata;
Rodentia;
          12983 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30.8%;
                                                                   Glycoprotein.
BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bence-Jones
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MW;
                                                                                                                                                                                                                                                      domains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 396.5; DB 1
Pred. No. 6.6e-24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPLEMENTARITY-DETERMINING FRAMEWORK 4.
BY SIMILARITY.
                                                N-LINKED (GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPLEMENTARITY - DETERMINING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FRAMEWORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FRAMEWORK 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FRAMEWORK 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPLEMENTARITY - DETERMINING
                                                                                                                                                                                                                                                                                                                                                                                               Craniata; Ver
Sciurognathi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
          3CF8ACE4BE447E41 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 E5B22E2FA7ABE481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               update)
on update)
                                                                                                                                                                                                                                                                                                                 J.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               117
                                                                                                                                                                                                                                                                                                                                                                                                 Vertebrata;
thi; Muridae;
                                                                                                                                                                                                                                                                         Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ą
                                                                                                                                                                                                                                                                                                                 Rogers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of antibody
                                                                                                                                                                                                                                                                         chain:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CRC64;
                                                                                                                                                                                                                                                                                                                 J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 112;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                              œ.
                                                                                                                                                                                                                                                                       homology among
                                                                                                                                                                                                                                                                                                                                                                                                                    Euteleostomi;
                                                                                                                                                                                                                                                                                                                 Sibley C.H.,
                                                                                                                                                                                                                                                                                                                                                                                                 Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INV (3) MARKER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     formation:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    111
                                                                                                                                                                                                                IGM MYELOMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1;
```

밁 δÃ В

of.

```
RESULT 14
KV2C_MOUSE
ID KV2C_MOUSE
AC P01628;
DT 21-JUL-1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 13
HVIC_HUMAN
ID CHUMAN
IN CONFLI
IT CONFL
IT CONFLI
IT CON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CHAIN
MOD_RES
DISULFID
CONFLICT
CONFLICT
CONFLICT
CONFLICT
CONFLICT
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NON_CONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bennich H.H., Johansson S.G.O., von Bahr-I
(In) Bach M.K. (eds.);
Immediate hypersensitivity: modern concept
Marcel Dekker, New York (1978).
-!- MISCELLANEOUS: THIS EPSILON CHAIN WAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens (Human)
Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence upd
15-JUL-1999 (Rel. 38, Last annotation u
15-GLEAVY CHAIN V-I REGION ND PRECURSOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE OF 16-142.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bell L.O., Gould H.J.;
"Cloning and sequence determination of the inmunoglobulin epsilon chain expressed in a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bell L.O.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kenten J.H., Molgaard H.V., Houghton
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A. MEDLINE-83065234; PubMed-6815656;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mammalia;
                                                                                                                                                                                                                   136
                                                                                                                                                                                                                                                                     109
                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                               76
                                                                                                                                                                                                                                                                                                                                                                                                                                       16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                              GTTVTVSS
                                                                                                                                                                                                                                                                                                                                                                                                                                     A02026; E1HUND
                                                                                                                                                                                                                                                                     GTTVTVSS 116
                                                                                                                                                                                                                                                                                                                                                            APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYC-----
                                                                                                                                                                                                                                                                                                                            APRFQGRVTMTRDASFSTAYMDLRSLRSDDSAVFYCAKSDPFWSDYYNFDYSYTLDVWGQ 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               _HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NQKFKGKATLTVDKSSSTAYMQLNSLTSEDSAVYYCARDYDWYFDVWGAGTTVTVSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYC-NFYGDALDYWGQGTTVTVSS 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16
16
17
17
17
121
                 (Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            lin epsilon chain a
Acad. Sci. U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      v ig;
                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   region;
                    01, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                143
143
111
111
17
50
64
121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             T -> V (IN REF. 2).
IH -> HI (IN REF. 2).
VG -> GV (IN REF. 2).
MISSING (IN REF. 2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         expressed in a myelo. 79:6661-6665(1982).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 384;
Pred. No. 7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IG HEAVY CHAIN V-I REGION ND. PYRROLIDONE CARBOXYLIC ACID.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Craniata; Vertebrata;
Catarrhini; Hominidae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DE80D280D002027E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             von Bahr-Lindstrom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      concepts and developments, pp.1-36,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    м.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              update
                                                                        113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    update)
R (FRAGMENTS).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1; I
7.7e-23;
nes 26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A
A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Derbyshire
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ISOLATED FROM A MYELOMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gene for a myeloma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             н.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cell
                                                                                                                                                                                                                                                                                                                                                                     -NF-YGDALDYWGQ 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R.B., Viney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ġ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2;
                       A CONTRACTOR OF THE CONTRACTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOUTH THE PROPERTY OF THE PROP
RA Chang J.-Y., Herbst H., Aebersold R., Braun D.G.;

RT "A new isotype sequence (V kappa 27) of the variable region of kappa-
rt light chains from a mouse hybridoma-derived anti-(streptococcal group
RT Application from a mouse hybridoma-derived anti-(streptococcal group
RT Application of the dimethylaminoazobenzene isothiocyanate technique
RT Application of the dimethylaminoazobenzene isothiocyanate technique
RT for the isolation of peptides.";
RI Biochem. J. 21:173-180(1983).

C -1- MISCELLANEOUS: THIS CHAIN IS FROM A HYBRIDOMA-DERIVED MONOCLONAL
C ANTIDODY AGAINST THE STREPTOCOCCAL GROUP A POLYSACCHARIDE.
DR PIR; A01913; KYKS7S.
DR INTERPRO; IPRO03006; -
DR PFAM; PF00047; dg; 1.
RT FROMAIN T region; Monoclonal antibody; Hybridoma.
T DOMAIN
24 39 COMPLEMENTARITY-DETERMINING 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    _MOUSE STANDARD; PRT; 113 AA.

PO1630;
21-JUL-1986 (Rel. 01, Created)
21-JUL-1996 (Rel. 01, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation update)
15-JUL-1990 (Rel. 38, Last annotation update)
15-KAPPA CHAIN V-II REGION 7S34.1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DISULFID
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PIR; A01910; KVMS51.
INTERPRO; IPR003006; -.
PFAM; PF00047; ig; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21-JUL-1986 (Rel. 01, Last 15-JUL-1999 (Rel. 38, Last IG KAPPA CHAIN V-II REGION Mus musculus (Mouse).
Eukaryota; Metazoa; Chordat
                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=83256427; PubMed=6409088,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     phosphorylcholine-binding Mol. Immunol. 17:711-718(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE-81052016; PubMed-6776396;
Appella E.;
Amino acid sequence of the light chain variable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ·!- MISCELLANEOUS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
les 75; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BINDS PHOSPHORYLCHOLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGTKLEIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Immunol. 17:711-718(1980)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; Metazoa; Chordata;
Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; Metazoa; Chordata;
Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1
24
40
55,
62
62
103
103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ig;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      region.
23
39
54
61
61
93
102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01, Last sequence update)
38, Last annotation update)
II REGION MOPC 511.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12496 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               murine myeloma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FRAMEWORK 1.
COMPLEMENTARITY-DETERMINING 1
FRAMEWORK 2.
COMPLEMENTARITY-DETERMINING 2
FRAMEWORK 3.
COMPLEMENTARITY-DETERMINING 3
FRAMEWORK 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 382; DB
Pred. No. 8.4e
L5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WAS ISOLATED FROM A MYELOMA PROTEIN THAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EFB0DC4DA2BD3450 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 1;
8.4e-23;
22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 113;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
```

243

0

Gaps

0

Ş

밁 Š

₿. Ş 밁

THIS PAGE BLANK (USPTO)

```
Minimum
Maximum
                                                                                                                                                                     Result
                                                                                                                                                                                                                                                                                                                                                                    Database
                                                                                                                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                            Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scoring table:
   Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                     DB DB
 428
401.5
396.5
393.5
393.9
393.8
390.3
390.3
385.5
387.5
372.3
372.3
332.3
332.3
332.3
332.3
332.3
                                                                                                                                    696.5
447.5
443.5
                                                                                                                                                                     Score
                                                                                                                                                                                                                                                                                                                                                                                                                    seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                  SPTREMBL_15:*
1: sp_archea:*
2: sp_bacteria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-297-181-2
1289
1 QVQLQQSGAELVRS
                                                                                                                                                                     Match
                                                                                                                                                                                                                                                 10:
11:
12:
13:
14:
                                                                                                                                                                              Query
374700 segs, 117207915 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         February 12, 2001, 15:22:50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GenCore version 4.5 Copyright (c) 1993 - 2000 Comp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QVQLQQSGAELVRSGASVKL.....CWQGTHSPLTFGAGTKLEIK
                                                                                                                                                                                                                                              sp_rodent:*
sp_virus:*
sp_vertebrate:*
sp_unclassified:*
                                                                                                                                                                                                                                                                                sp_phage:*
sp_plant:*
                                                                                                                                                                                                                                                                                                                 sp_invertebrate:*
sp_mammal:*
                                                                                                                                                                                                                                                                                                                                                 sp_archea:*
sp_bacteria:*
                                                                                                                                                                                                                                                                                                 sp_organelle:*
                                                                                                                                                                                                                                                                                                          sp_mhc:*
                                                                                                                                                                                                                                                                                                                                          sp_fungi:*
                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                   human:*
 DВ
Q9UYFO
Q9U185
Q9U185
Q9U194
Q9QXFQ
Q9U195
Q9U194
Q9U194
Q9U194
Q9U197
Q9U194
Q9U198
Q9U198
Q9U198
Q9U181
Q9U178
Q9U188
Q9U188
                                                                                                                                                                     Ħ
                                                                                                                                                                                               SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Search time 42.85 Seconds (without alignments) 664.680 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                               374700
       091182 mus
09u194 homo
09u194 homo
09j181 mus
09j175 mus
09j177 mus
09j177 mus
09j266 mus
09z166 mus
09z166 mus
09z166 mus
09z166 homo
                                                                                                  Q9qyf0 mus
Q9u180 homo
Q9y185 mus
Q9z1c4 mus
Q9qxe9 mus
Q9qxf0 mus
Q9u195 homo
09u189
                                                                                                                                                                     Description
 homo
                                                                                                                                           s musculu
sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         243
                       musculu
musculu
musculu
musculu
sapien
musculu
musculu
sapien
sapien
sapien
                                                                                          musculu
                                                                                                          musculu
                                                                                                                          musculu
                                                                                  sapien
```

45	44	43	42	41	40	39	38	37	36	ა 5	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20
268.5	274	282.5	285	286.5	288	289	289.5	289.5	289.5	291	292	293	294	296.5	297	298	301	302.5	305.5	305.5	309.5	309.5	310.5	311	317.5
20.8	21.3	21.9	. 22.1	22.2	•	•	22.5		•			• •	22.8	23.0	23.0	23.1	23.4	23.5	-23.7	23.7	24.0	24.0	24.1.	24.1	24.6
104	437	99	109	119	150	124	108	103	102	124	106	122	118	108	118	109	147	131	214	108	116	108	121	107	113
4	11	11	4	4	4	o	4	11	11	σ	Ωŧ	4	4	4	4	4	4	4	11	4	4	4	4	4	4
Q9UL87	Q9R1A4	Q9JL74	Q9UL85	Q9UL73	095973	Q9N0W4	Q9UL83	Q9JL80	Q9JL79	Q9N0W6	Q9U410	Q9UL84	Q9UL91	Q9UL79	Q9UL72	Q9UL86	Q9Y509	Q9UL88	Q9R1A5	Q9UL70	Q9UL93	Q9UL77	Q9UL71	Q9UL81	Q9UL90
Q9u187 homo sapien	Q9r1a4 mus musculu	Q9j174 mus musculu	Q9u185 homo sapien	homo		pryct	Q9ul83 homo sapien	Snm	Q9j179 mus musculu	Q9n0w6 oryctolagus	schis	Q9u184 homo sapien	homo	homo	homo	homo		homo	Q9r1a5 mus musculu	Q9u170 homo sapien	homo	Q9ul77 homo sapien	Q9u171 homo sapien	L homo	Q9u190 homo sapien

## ALIGNMENTS

RESULT Q9QYF0

Q9QYF0 Q9QYF0; Q1-MAY-2000 Q1-MAY-2000 Q1-OCT-2000

) (TrEMBLrel.) (TrEMBLrel.)

13, 15,

Created)
Last sequence update)
Last annotation update)

PRELIMINARY;

298 AA

RRR OCC OCT DIT

CN 8.

SCFV.

Mus musculus (Mouse). Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. NCBI\_TaxID-10090;

- "	•																	
Oy 61 APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCNFYGDALDYWGQGTTVTVSSG 117	OY 1 OVOLOOSGAELVRSGASVKLSCTASGENIKDYYMHWVKORPEOGLEWIGWIDPENGDTEY 60	Query Match 54.0%; Score 696.5; DB 11; Length 298; Best Local Similarity 53.3%; Pred. No. 2.9e-54; Matches 131; Conservative 43; Mismatches 63; Indels 9; Gaps 3;	 SQ SEQUENCE 298 AA; 31867 MW; E0F96B8A17004317 CRC64;	DR INTERPRO; IPR003006; DR PFAM; PF00047; ig; 2.	DR HSSP; P01607; 13EI.	DR EMBL; AB036341; BAA88633.1;	RL Submitted (DEC-1999) to the EMBL/GenBank/DDBJ databases.	RT method.";	RT antibody recognizing a cell polarity using a phage display subtraction	RT ' "Isolation of a novel type of vascular cell wall-specific monoclonal	RA shinohara N., Demura T., Fukuda H.;	RC STRAIN=BALB/C; TISSUE~SPLEEN;	RP SEQUENCE FROM N.A.	RN [2] .	RL Submitted (DEC-1999) to the EMBL/GenBank/DDBJ databases.	RA Shinohara N., Demura T., Fukuda H.;	RC STRAIN-BALB/C; TISSUE-SPLEEN;	RP SEQUENCE FROM N.A.

```
RESULT
Q9JL85
   RRR OCC OCT DIT
                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                             멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 87
                                                                                                                                 Q9JL85;
Q9JL85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q9UL80;
01-MAY-2000 (TIEMBLrel. 13, Created)
01-MAY-2000 (TIEMBLrel. 13, Last sequence update)
01-JUN-2000 (TIEMBLrel. 14, Last annotation update)
MYOSIN-REACTIVE IMMUNOGLOBULIN LIGHT CHAIN VARIABLE
HOMO Saplens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Eukaryota; Metazoa; Primates; Catarrhini; Hominidae;
SEQUENCE FROM N.A. STRAIN-BALB/C; Malkiel 6., Liao I
                                                                                                                                                                                                                                                                                                                                          NON_TER
NON_TER
SEQUENCE
                                                                                    01-OCT-2000 (Tremblrel. 15, 01-OCT-2000 (Tremblrel. 15, 01-OCT-2000 (Tremblrel. 15, ANTI-MYOSIN IMMUNOGLOBULIN
                                                      Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                    Clin. Immunol. Immunopathol. EMBL; AF035034; AAD56270.1; INTERPRO; IPR003006; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
MEDLINE=98277139; PubMed=9614934;
Wu X., Liu B., Van der Merwe P.L.,
                                                                             Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                            PFAM; PF00047;
                                                                                                                                                                                                                                                                                                                                                                                                                                  "Myosin-reactive autoantibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                           Young D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=9606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q9UL80
                                                                                                                                                                                                                      192
                                                                                                                                                                                                                                                                  132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                214
                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                        DVLMTQTFLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQSPKRLIYLVSKLD 191
                                                                                                                                                                                                            SGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTH-SPLTFGAGTKLEIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TKLEIK 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TKLEIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCMQGTHWPPWTFGQGTKVEIK
                                                                                                                                                                                                                                             DVVMTQSPLSLPVTLRQPASISCRSSQSPVYSDGNTYLNWFQQRPGQSPRRLIYKVSNRD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QSPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGGSGGGGGGGGSDIELTQSPASLSASVGETVTITCRASGNI-----HNYLAWYQQKQG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGGSGGGGGGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPG
                                                                                                                                                                                                                                                                                        87;
                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                        1
114
114
                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                            ΑĄ,
                                                                                                                                                                                                                                                                                                                                                                           ig; 1.
 ۲.,
                                                                                                                                                                                                                                                                                                                                           114
12775
                                                      Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                               34.78;
  Cunningham
                                                                                                                                                                                                                                                                                                                                            MW;
                                                                                                                                                                                                                                                                                      11;
                                                                                    . Created)
. Last sequence update)
. Last annotation update)
. HEAVY CHAIN VARIABLE REGION (FRAGMENT).
                                                                                                                                                                                                                                                                                      Score 447.5;
Pred. No. 1.2e
l1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                            87:184-192(1998).
                                                      Craniata; Vertebrata;
Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                            070E31E210D1CB01 CRC64;
 M.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                 ín
                                                                                                                                                                                                                                                                                                                                                                                                                                  rheumatic
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kalis N.N., Berney
                                                                                                                                             109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 114
  Diamond
                                                                                                                                                                                                                                                                                                 .2e-32;
                                                                                                                                             ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                           DB 4;
                                                        Muridae;
                                                                                                                                                                                                                                                                                        14;
                                                                                                                                                                                                                                                                                                                                                                                                                                  carditis
 ₩.,
                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                           Length
                                                      Euteleostomi;
; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REGION (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                       S.X
                                                                                                                                                                                                                                                                                       ۲
                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       158
                                                                                                                                                                                                                                                                                       1;
```

```
RESULT
Q9QXE9
ID Q9
    δÃ
                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCOCCUTATION OF THE PROPERTY 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SALARA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q9Z1C4
Q9Z1C4;
Q9Z1C4;
Q1-MAY-1999
Q1-MAY-1999
Q1-MAY-2000
       090XE9:
01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2000 (TrEMBLrel. 14, Last annotation update)
IMMUNOGLOBULIN HEAVY CHAIN V-D-J REGION (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NON_TER
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; AF2
NON_TER
NON_TER
SEQUENCE
                                                                                                                                           Q9QXE9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matis L.M., Evans M.J.;
Matis L.M., Evans M.J.;
"Humanized porcine VCAM-specific monoclonal antibodies with chimeric
TaG2/G4 constant regions block human leukocyte binding to porcine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE:
STRAIN-BALB/C;
STRAIN-BALB/C;
T.P., Giannoni M.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metaːoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; MusCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-MAY-1999 (TIEMBLIEL. 10, Created)
01-MAY-1999 (TIEMBLIEL. 10, Last sequence update)
01-MAY-2000 (TIEMBLIEL. 13, Last annotation update)
01-MAY-2000 (TIEMBLIEL. 13, Last annotation update)
ANTI-PORCINE VCAM MAB 3F4 HEAVY CHAIN VARIABLE REGION
Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Characterization of cross-reactive monoclonal anti-myosin/anti-n-acetyl-glucosamine antibodies from mice with autoimmune myocarditis."; Submitted (NOV-1999) to the EMBL/GenBank/DDBJ databases.
EMBL; AF206021; AAF69319.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IgG2/G4 constant regions
endothelial cells.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PFAM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; U78801; AAD00293.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INTERPRO;
                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                         -61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                        1 QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ø
                                                                                                                                                                                             ഗ
                                                                                                                                                                                                                                                                                          APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYC--NFYGDALDYWGQGTTVTVSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; PF00047; ig; 1.
TER 1: 1
TER 118 · 118
ENCE 118 AA; 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEYAPKFQGKA
                                                                                                                                                                                                                                                                   TQKFRGKATLTADKSSSTAYMQLSSLASEDSAVYYCARRTVGGYFDYWGQGTTLTVSS
                                                                                                                                                                                                                                                                                                                                                             QVQVQQSGAELARPWASVKLSCKASGYNFNSYWMQWVKQRPGQGLEWIGAIYPGDGDTSY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITSDTSSNTAXLQLSSLTSEDTAVXYCVRRGAVVEDYWGQGTALTVSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TMTADTSSNTAYLQLSSLASEDTAVYYCNFYGDAL-DYWGQGTTVTVSS 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AELVKPGASVKLSCTASGFNIEDTYMHWVKQRPEQGLEWIGRIDPATGHSKYDPKFQGKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                              84;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ed (NOV-1996) to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IPR003006;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    109
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
(Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 118
13036 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 109
11944 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           33.2%;
71.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       34.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 428;
Pred. No. 6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hartman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 443
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DFE615FE6CED4EDE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    90EEC559D31EC4FC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          443.5; DB 1
No. 2.6e-32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 11;
.9e-31;
                                                                                                                                                AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Elliott E.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Squinto
                                                                                                                                                                                                                                                                                                                                                                                                                                                              2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S.P.,
                                                                                                                                                                                                                                                                                                                                                               60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ۳.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ۲,
```

```
RESULT
Q9UL95
ID Q9
AC Q0
DT 00
DT 00
DT 00
DT 01
DT 01
                                                                                                                                                                                                                                                   B
                                                                                                             В
                                                                                                                                QΥ
                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 78
             Q9UL95;
01-MAY-2000
01-MAY-2000
01-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                   01-MAY-2000
01-MAY-2000
01-JUN-2000
                                                                                                                                                                                                                                                   NON_TER
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PFAM; PI
NON_TER
                                                                                                                                                                                                                                                                                 Clemens A., Rademaekers A., Submitted (DEC-1997) to the EMBL; AJ225171; CAB65236.1; INTERPRO; IPRO03006; -. PFAM; PF00047; 19; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Clemens A., Rademaekers A., Submitted (DEC-1997) to the EMBL; AJ225174; CAB65237.1; INTERPRO; IPRO03006; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                      01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-UN-2000 (TrEMBLrel. 14, Last annotation update)
IMMUNOGLOBULIN HEAVY CHAIN V-D-J REGION (FRAGMENT).
                                                         Q9UL95
                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q9QXF0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INTERPRO;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                  61
                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYC----NFYGDALDYWGQGTTYTVSS 116
                                                                                                                                                                QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NQKFKGKATLTVDKSSSTAYMQLNSLTSEDSAVYYCARDKDYY---FDYWGQGTTLTVSS
                                                                                                                                                     EVQLQQSGPELVKPGASVKMSCKASGYTFTDYYMKWVKQSHGKSLEWIGDINPNNGGTSY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PF00047; ig; i.
ER 1 1
ER 117 117
NCE 117 AA; 13000 MW;
                                                                                                                                                                                                 . Similarity 77; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                1
117
117
(Tremblrel. 13, Created)
(Tremblrel. 13, Last sequence update)
(Tremblrel. 14, Last annotation update)
FIVE IMMUNOGLOBULIN HEAVY CHAIN VARIABLE
                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                         PRELIMINARY
                                                                                                                                                                                                                                                      AA;
                                                                                                                                                                                                                                                   117
13060
                                                                                                                                                                                                                                                                                                                                                                        Chordata;
Rođentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chordata;
Rodentia;
                                                                                                                                                                                                       30.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31.1%;
                                                                                                                                                                                                                                                      W.
                                                                                                                                                                                                 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Specht C., Koelsch EMBL/GenBank/DDBJ (
                                                                                                                                                                                              Score 396.5;
Pred. No. 4.3e
L5; Mismatches
                                                                                                                                                                                                                                                                                                                   Specht C., Koelsch E.;
EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 401.5;
Pred. No. 1.5e
15; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                         Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDDE2AF84D499734 CRC64;
                                                                                                                                                                                                                                                   D816AD0858A47E4C CRC64;
                                                                                                                                                                                                        396.5;
No. 4.3
                                                        125
                                                                                                                                                                                                                                                                                                                                                                                                                                                             117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5; DB 11;
1.5e-28;
hes 21;
                                                                                                                                                                                              5; DB 11;
1.3e-28;
nes 21;
                                                        3
                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ħ
:
                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
   REGION
   (FRAGMENT).
                                                                                                                                                                                               7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus
                                                                                                                                                                                                                                                                                                                                                                         Mus.
                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                      60
                                                                                                                                                                           60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60
                                                                                                            117
                                                                                                                                                                                               2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2;
```

```
Qy .
                    Q
                                            밁
                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                        Query Match
Best Local S
Matches 76
                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 74
                                                                                                                                                                                                                                                                                                                                    Q9JL82;
Q9JL82;
Q1-OCT-2000
Q1-OCT-2000
Q1-OCT-2000
                                                                                                                                                 NON_TER
NON_TER
SEQUENCE
                                                                                                                                                                          Malkiel S., Liao L., Cunningham M.W., Diamond B.;
"Characterization of cross-reactive monoclonal anti-myosin/anti-n-
acetyl-glucosamine antibodies from mice with autoimmune myocardit:
Submitted (NOV-1999) to the EMBL/GenBank/DDBJ databases.
EMBL; AF206024; AAF69322.1; -.
NON_TER 1 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  [1]
SEQUENCE FROM N.A.
MEDLINE=98277139; PubMed=9614934;
MEDL 1111 B., Van der Merwe P.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NON_TER
                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mamumalia; Eutheria; Rodentia; Sciurognathi; Muridae
                                                                                                                                                                                                                                                                                                                          01-0CT-2000 (TrEMBLrel. 15, Created)
01-0CT-2000 (TrEMBLrel. 15, Last sequence update)
01-0CT-2000 (TrEMBLrel. 15, Last annotation update)
01-0CT-2000 (TrEMBLrel. 15, Last annotation update)
ANTI-MTOSIN IMMUNOGLOBULIN LIGHT CHAIN VARIABLE REG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Mammalia; Eutheria; NCBI_TaxID=9606;
                                                                                                                                                                                                                                          SEQUENCE FROM N'.A.
STRAIN-BALB/C;
                                                                                                                                                                                                                                                                             NCBI_TaxID-10090;
                                                                                                                                                                                                                                                                                                                Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Clin. Immunol. Immunopathol. EMBL; AF035019; AAD56255.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PFAM; PF00047;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INTERPRO;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             fetus."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Myosin-reactive autoantibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (Human)
                      200
                                                                    140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    112
                                                                                                                                                                                                                                                                                                                                                                                                                                             121
 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  43
                                            ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        \vdash
                                                                                                                                                                                                                                                                                                                                                                                                            8
             GSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGTKLEIK
                                                       LTLSVTIĞQPASISCKSSQSLLDSDGKTYLNWLLQRPGQSPKRLIYLVSKLDSGVPDRFT 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY
GSGSGTDFTLKISRVEAEDLGVYFCSQTTHVPYTFGGGTKLEIK
                                            LSLPVSLGDQASISCRSSQSLVHTNGNTYLHWYLQKPGQSPKLLIYKVSNRFSGVPDRFS
                                                                                                                                                                                                                                                                                                                                                                                                                                             VTVSS 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VTVSS 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APKFQGKATMIADTSSNTAYLQLSSLASEDTAVYYC-----NFYGDALDYWGQGTT 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EVQLVESGAEVKKPGASVKVSCKASGYTFTGYYMHWVRQAPGQGLEWMGWINPNSGGTNY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    74;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                h 30.5%;
Similarity 59.2%;
74; Conservative 1
                                                                                          Similarity 73.176; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IPR003006;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            125 AA;
                                                                                                                                                  104 AA;
                                                                                                                                                               104+
                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19;
                                                                                                                                                  11360 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chordata;
Primates;
                                                                                                     30.5%;
73.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MW:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      16;
                                                                                          12;
                                                                                         Score 393; DB 11;
Pred. No. 7.6e-28;
2; Mismatches 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 393.5; DB 4;
Pred. No. 8.7e-28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 87:184-192(1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Craniata; Vertebrata; Catarrhini; Hominidae
                                                                                                                                                  5DA8BBFD5F0AA1AE CRC64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0D3CD5C232488EAC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rheumatic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kalis
                                                                                                                                                                                                                                                                                                                                                                                    104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .7e-28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N.N.,
                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hominidae;
                                                                                                                                                                                                                                                                                         Muridae;
                                                                                          16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        carditis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Berney
                                                                                                                                                                                                                                                                                                                            REGION
                                                                                                               Length
104
                     243
                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo
                                                                                                                                                                                                                                                                                                                           (FRAGMENT).
                                                                                                                                                                                                          myocarditis.";
                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9,
                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                            60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ۳.
```

```
RESULT
Q9UL92
                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                       Matches
  NONLITER
NONLITER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                       NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INTERPRO;
PFAM; PFO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              09UL92;
01-MAY-2000 (TrEMBLrel.
01-MAY-2000 (TrEMBLrel.
01-JUN-2000 (TrEMBLrel.
                                                                                                                                                                                                                         Q9UL94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
MEDLINE=98277139; PubMed=9614934;
Wu X., Liu B., Van der Merwe P.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota;
Mammalia;
                                                                                                 MEDLINE=98277139; PubMed=9614934; Wu X., Liu B., Van der Merwe P.L.,
                                                                                                                                                                                  MYOSIN-REACTIVE IMMUNOGLOBULIN HEAVY
                                                                                                                                                                                                                                    Q9UL94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MYOSIN-REACTIVE IMMUNOGLOBULIN HEAVY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q9UL92
                               Р. № PF00047;
                                      INTERPRO;
                                                                       fetus.
                                                                                          foung D.C.
                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                         NCBI_TaxID=9606;
                                                                                                                                                     /dammalia
                                                                                                                                                             Eukaryota; Metazoa;
                                                                                                                                                                                                                01-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tetus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Young D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=9606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens (Human)
                                                                                'Myosin-reactive autoantibodies
                                                                                                                                                                        fomo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'Myosin-reactive autoantibodies
                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                       113
                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                     10
                                                                                                                                                                                                                                                                                                                                                                                   μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          G
                                                                                                                                                                                                                                                                                                                                                                          QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY 60
                                                                                                                                                                                                                                                                                                       TVSS 116
                                                                                                                                                                                                                                                                                                                                     APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYC--NFY
                                                                                                                                                                                                                                                                                     TVSS
                                                                                                                                                                                                                                                                                                                          AQKFQGRVTMTRDTSTSTVYMELSSLRSEDTAVYYCARGLYVVVPAAFSRFDYWGQGTLV
                                                                                                                                                                                                                                                                                                                                                                 EVQLVESGAEVKKPGASVKVSCKASGYTFSSYYMHWVRQAPGQGLEWMGIINPSGGSTSY 60
                                                   AF035020; AAD56256.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AF035022; AAD56258.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PF00047;
                                                             Immunol. Immunopathol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Immunol. Immunopathol.
                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                        IPR003006;
                                                                                                                                                   Eutheria;
                                                                                                                                                                                                                                                                                     124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IPR003006;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       124
124 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Metazoa;
  119
            119
                                                                                                                                                                                           (TrEMBLrel.
                                                                                                                                                                                                               (TrEMBLrel.
                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                              ig;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1g;
  AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        124
13580 MW;
                                                                                                                                                     Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Primates; Catarrhini;
  13205
                                                                                                                                                              Chordata;
                                        .'
                                                                                                                                                                                                                                                                                                                                                                                                                30.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .. 13, Created)
1. 13, Last sequence update)
1. 14, Last annotation update)
1. 14, HEAVY CHAIN VARIABLE R
                                                                                                                                                                          13, Createo;
13, Last sequence update;
14, Last annotation update;
17, ORITLIN HEAVY CHAIN VARIABLE
  ¥.
                                                                                                                                                                                                                                                                                                                                                                                                       14;
                                                            87:184-192(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                 Score 390;
Pred. No. 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  87:184-192(1998)
                                                                                                                                                   Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Craniata; Vertebrata;
  13E64F5345F4A16E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        1BAAACBD96ACD2A2 CRC64;
                                                                                in rheumatic carditis and normal
                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rheumatic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kalis N.N.,
                                                                                                  Kalis N.N.,
                                                                                                                                                                                                                                    119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        124
                                                                                                                                                                                                                                                                                                                                                                                                                DB 4;
.8e-27;
                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hominidae; Homo
                                                                                                                                                                                                                                                                                                                                                                                                       27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      carditis and normal
                                                                                                    Berney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Berney
                                                                                                                                                                                                                                                                                                                                                                                                                         Length 124;
                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                             ---GDALDYWGQGTTV 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Euteleostomi;
                                                                                                                                                                                 REGION (FRAGMENT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REGION
                                                                                              S.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .
N
                                                                                                                                                                                                                                                                                                                                                                                                       ω,
                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                      ۲,
```

```
DRIFT RAPROC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
Q9JL81
                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                   멍
                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SQ FIT RACE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                  Q9JL75
Q9JL75;
01-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q9JL81;
Q9JL81;
01-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NON_TER
SEQUENCE
EMBL;
            Malkiel S., Liao L., Cunningham M.W., Diamond B.;
"Characterization of cross-reactive monoclonal anti-myosin/anti-n-
acetyl-glucosamine antibodies from mice with autoimmune myocarditi
submitted (NOV-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Malkiel S., Liao L., Cunningham M.W., Diamond B.; "Characterization of cross-reactive monoclonal anti-myosin/anti-n-" "Characterization of cross-reactive monoclonal anti-myosin/anti-n-" "Characterization of cross-reactive monoclonal anti-myosin/anti-n-" "Submitted (NOV-1999) to the EMBL/GenBank/DDBJ databases.

SUBBL, AF206025; AAF69323.1; "..."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-OCT-2000 (TrEMBLrel. 15, 01-OCT-2000 (TrEMBLrel. 15, 01-OCT-2000 (TrEMBLrel. 15, ANTI-MYOSIN IMMUNOGLOBULIN )
                                                                                                                    Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                         01-OCT-2000
01-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia;
                                                               STRAIN-BALB/C;
                                                                                                       NCBI_TaxID=10090;
                                                                                                                                              Mus musculus (Mœuse).
                                                                                                                                                            ANTI-MYOSIN IMMUNOGLOBULIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN-BALB/C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus (Mouse)
                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                62
                                                                                                                                                                                                                                                                                                                                                                              10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                         12
                                                                                                                                                                                                                                                                                                                         70
                                                                                                                                                                                                                                                                                                                                                   N
                                                                                                                                                                                                                                                                                                              QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY
                                                                                                                                                                                                                                                                                              LTVDKSSSTAYMQLSSPTSEDSAVYYCARSNYYGSSLYYFDYWGQGTTLTVSS
                                                                                                                                                                                                                                                                                                                                                   QLVRPGASVK1SCKASGYSFTSYWMHWVKQRPGQGLEWIGMIDPSDSETRLNQKFKDKAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCNFYGDA---LDYWGQGTTVTVSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EVQLVESGAEVKKPGASVKVSCKASGYTFTGYYMHWVRQAPGQGLEWMGWINPNSWTTNY
                                                                                                                                                                                                                                                                                                                                                                            ELVRSGASVKLSCTASGFNIKDYYMHWVKORPEOGLEWIGWIDPENGDTEYAPKFOGKAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AQKFQGKVTMTKDTSISTAYMELSRLRSDDTAVYYCARGGGRGLWFDPWGQGTLVTVSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 74; . Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                       0 (TrEMBLrel. 15,
0 (TrEMBLrel. 15,
0 (TrEMBLrel. 15,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        114
114 ·AA;
                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        114
12829 MW;
                                                                                                                     Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                   29.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6,29
8,29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              . 28;
                                                                                                                                                            , Last sequence update)
, Last annotation update)
HEAVY CHAIN VARIABLE REGION
                                                                                                                                                                                                                                                                                                                                                                                                        15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        , Last annotation update)
HEAVY CHAIN VARIABLE REGION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14;
                                                                                                                                                                                                                                                                                                                                                                                                     Score 384; DB
Pred. No. 5.4e
15; Mismatches
                                                                                                                                                                                                    Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                    Craniata; Vertebrata; Sciurognathi; Muridae
                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        404885FDE6BA56F8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 385.5;
No. 4.1
                                                                                                                                                                                                                               109
                                                                                                                                                                                                                                                                                                                                                                                                                   DB 11;
.4e-27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .2e-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           æ
                                                                                                                                                                                                                               A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             멂
                                                                                                                       Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                         19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4.
                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                     Euteleostomi;
; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (FRAGMENT).
                                                                                                                                                               (FRAGMENT)
                                                                                                                                                                                                                                                                                                                          116
                                                                                                                                                                                                                                                                                                                                                                                                        έ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ω
                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      116
                                                                                                                                                                                                                                                                                                                                                                              69
                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                         2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1;
```

:

j-

```
뫄
                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                       Q
                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 72
                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
Matches 73; Conser
                                                                                                                                         Q9Y298;
Q9Y298;
01-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q9JL77 PRELIMINARY; PRT; 110 AA.
Q9JL77; PRTEMBLrel. 15, Created)
01-OCT-2000 (TrembLrel. 15, Last sequence update)
01-OCT-2000 (TrembLrel. 15, Last annotation update)
01-OCT-2000 (TrembLrel. 15, Last annotation update)
ANTI-MYOSIN IMMUNOGLOBULIN HEAVY CHAIN VARIABLE REGION (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NON_TER
NON_TER
SEQUENCE
[1]
SEQUENCE FROM N.A.
MEDLINE-98322155; PubMed-9657749;
MEDLINE-98322155; PubMed-9657749;
                                                                                                                                                                                                                                                                                                                                                                                                     NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN-DBA/2;
MalkLel S., Liao L., Cunningham M.W., Diamond B.;
"Characterization of cross-reactive monoclonal anti-myosin/anti-n-acetyl-glucosamine antibodies from mice with autoimmune myocarditisubmitted (NOV-1999) to the EMBL/GenBank/DDBJ databases.
EMBL, AF206029; AAF69327.1; -.
                                                                    Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                        IGG
                                                                                                               01-NOV-1999 (TrEMBLrel.
01-MAY-2000 (TrEMBLrel.
IGG VH PROTEIN PRECURSOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=10090;
                                                                                                                                                                                                                                      63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10
                                                                                                                                                                                                                                                                                                         11 LVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEYAPKFQGKATM 70
                                                                                                                                                                                                                                                           71 TADTSSNTAYLQLSSLASEDTAVYYC----NFYGDALDYWGQGTTVTVSS 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13
                                                                                                                                                                                                                                                                                   ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>بـــ</u>
                                                                                                        HA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEYAPKFQGKAT 69
|||: |||||:|| |||: | |||||:| | |||||||:|:| | ||:| ||:|||||
ELVKPGASVKMSCKASGYTFTSYVMHWVKQKPGQGLEWIGYINPYNDGTKYNEKFKGKAT 60
                                                                                                                                                                                                                                   LVRPGASVKLSCKASGYTFTSSWMHWAKQRPGQGLEWIGEIHPNSGHTNYNEKFKGKATL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 Similarity 64.9
72; Conservative
                                                                                                                                                                                                                                                                                                                                                                                         1
110
110 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         109
109
                                                                                                                                                     (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AA;
                                                                                                                   PRECURSOR
                                                                                                                                                                                                                                                                                                                                                                                          110
12138 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29.6%;
                                                                                                                                                                                                                                                                                                                                           28.9%;
                                                                                                                           12, Created)
12, Last sequence update)
13, Last annotation update)
                                                                                                                 (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WW;
                                                                                                                                                                                                                                                                                                                                  11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 381; DB Pred. No. 9.4e
                                                                                                                                                                                                                                                                                                                                           Score 372; DB 1
Pred. No. 6e-26;
                                                                                                                                                                            PRT;
                                                                    Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                          2EDE81FB5862C9AF CRC64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FF65E441BBF936A6
                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                            150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 11;
).4e-27;
                                                                                                                                                                            AA
                                                                                                                                                                                                                                                                                                                                                      DB 11;
                                                                                                                                                                                                                                                                                                                                  19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CRC64;
                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                 myocarditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6
                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2
```

Job time: 101 sec

February

12,

2001,

15:24:31

밁

61

NQRLKDKAILTVDKSSNTAYMQFSGPTSEDSAVYYCT-RGEVSWFAYWGQGTLVTVSA

2

```
9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
          Qy
                                 В
                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SQ FTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 71; Conser
                                                                                          Query Match
Best Local :
                                                                                Matches
                                                                                                                                                                                                      Mueller J.P., Giannoni M.A., Hartman Matis L.M., Evans M.J.; "Humanized porcine VCAM-specific monc IgG2/G4 constant regions block human endothelial cells."; submitted (NOV-1996) to the EMBL/Genf
                                                                                                                                                                                                                                                                                                                                                        Q921C6 PRELIMINARY; PRT; 117 AA.
Q921C6;
Q1-1C6;
Q1-MAY-1999 (TrEMBLrel. 10, Created)
Q1-MAY-1999 (TrEMBLrel. 10, Last sequence update)
Q1-MAY-2000 (TrEMBLrel. 13, Last annotation update)
ANTI-PORCINE VCAM MAB 2A2 HEAVY CHAIN VARIABLE REGION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NON_TER
SEQUENCE
                                                                                                                                                  NON_TER
                                                                                                                                                                                                                                                                                                              Mus musculus (Mouse).

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus MCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Blood 92:496-506(1998).
EMBL; AJZ24083; CAA11829.1;
                                                                                                                                                                                   EMBL; U78799; AAD00291.1; INTERPRO; IPR003006; -.
                                                                                                                                                                                                                                                                             STRAIN-BALB/C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INTERPRO; IPR003006; -. PFAM; PF00047; ig; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Mechanism and kinetics of factor VIII inactivation: study with an IgG4 monoclonal antibody derived from a hemophilia A patient with inhibitor.";
                                                                                                                                        SEQUENCE
                                                                                                                                                                       PFAM; PF00047; ig; 1.
                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                            15
                                 _
                                                        \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  \vdash
                                QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QVQLVQSGAEVKKPGASVKVSCKVSGYTLTELPVHWVGQAPGKGLEWVGSFDPESGESIY 79
ch 27.5%;
l Similarity 58.5%;
69; Conservative 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                        117
117 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 150 ·
150 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                             ,,,
                                                                                                                                                    117
                                                                                                                                        13122 MW; 4F65B193AFB77E5B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 16031 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18;
                                                                                15;
                                                                                                                                                                                                           EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 367.5; DB '
                                                                              Score 354.5; DB 1
Pred. No. 2.3e-24;
5; Mismatches 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 563D164AB22802D5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                  monoclonal antibodies with chimeric 
uman leukocyte binding to porcine
                                                                                                                                                                                                                                                                  S.L., Elliott E.A.,
                                                                                                     DB 11; Length
                                                                                31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4.
                                                                                                                                                                                                                                 binding
                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                               (FRAGMENT).
                                                                                                                                                                                                                                                                  Squinto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1;
                                                                               ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                              Gaps
                                  60
                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
```

GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Minimum DB seq
Maximum DB seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   on:
                                                                                                                                                                                                                                                                                                                                                                          Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                     985.5
961
911
911
906
900
900
                                                                                                                                                                                                                                                                       Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A_Geneseq_36:*
1: /SIDS1/gcgda
2: /SIDS1/gcgda
3: /SIDS1/gcgda
4: /SIDS1/gcgda
100.0
99.1
76.5
77.6
70.7
70.7
70.3
69.8
69.8
69.8
                                                                                                                                                                                                                                                                       Match
                                                                                                                                                                                                                                                                                               Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-297-181-2
1289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 268485 segs, 34193795 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 February 12, 2001, 15:22:45; Search time 28.25 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /SIDS1/gcgdata/geneseq/geneseqp/AA1988.DAT:*

//SIDS1/gcgdata/geneseq/geneseqp/AA1989.DAT:*

//SIDS1/gcgdata/geneseq/geneseqp/AA1990.DAT:*

//SIDS1/gcgdata/geneseq/geneseqp/AA1991.DAT:*

//SIDS1/gcgdata/geneseq/geneseqp/AA1991.DAT:*

//SIDS1/gcgdata/geneseq/geneseqp/AA1993.DAT:*

//SIDS1/gcgdata/geneseq/geneseqp/AA1994.DAT:*

//SIDS1/gcgdata/geneseq/geneseqp/AA1994.DAT:*

//SIDS1/gcgdata/geneseq/geneseqp/AA1995.DAT:*

//SIDS1/gcgdata/geneseq/geneseqp/AA1997.DAT:*

//SIDS1/gcgdata/geneseq/geneseqp/AA1997.DAT:*

//SIDS1/gcgdata/geneseq/geneseqp/AA1997.DAT:*

//SIDS1/gcgdata/geneseq/geneseqp/AA1997.DAT:*

//SIDS1/gcgdata/geneseq/geneseqp/AA1997.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QVQLQQSGAELVRSGASVKL.....CWQGTHSPLTFGAGTKLEIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /SIDS1/gcgdata/geneseq/geneseqp/AA1980.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1981.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1982.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1983.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /SIDS1/gcgdata/geneseq/geneseqp/AA1984.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1985.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1986.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /SIDS1/gcgdata/geneseq/geneseqp/AA1986.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA1987.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                             /SIDS1/gcgdata/geneseq/geneseqp/AA1999.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp/AA2000.DAT:*
                                                                                                                                                                                                                                                                       Length
                                       249
281
666
270
553
                                                                                                                                                                                        243
535
535
                                                                                                                                                                                                                                                                       DB
                                                                                                                                                                                                                                                                       Ħ
                                                                                                                                            W60769
W28491
W28492
Y06273
W60770
                                       W73223
                                                             W11508
                                                                                                                                                                                                                                                                                                                                    SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (without alignments)
294.127 Million cell updates/sec
                                                    Single chain antib
Human p53 protein
Human p53 protein
Anti FC alpha rece
Single chain antib
Fusion protein pIC
Fusion protein pIC
Fusion protein (80:
MFE-23 antibody
Single chain anti-
                                                                                                                                                                                                                                                                     Description
                                       H22-anti-CEA antib
```

.5 61.	98.5 61.	99 62.	01.5 62.	.5 62.	04 62.	04 62.	04 62.	05.5 62.	.5 62.	12 63.	12 63.	13 63.	15.5 63.	16.5 63.	16.5 63.	22.5 63.	28.5 64.	828.5 64.3	28.5 64.	28.5 64.	29 64.	43.5 65.	43.5 65.	.5 65.	48.5 65.	50 65.	.5 66.	59 66.	63 67.	66 67.	66 67.	69 67.
260	260	599	263	249	599	599	556	253	248	366	365	580	281	305	305	248	249	249	248	247	248	673	289	288	311	242	311	251	251	361	348	532
20	20	20	20	13	21	19	20	16	20	18	18	20	18	21	21	20	17	14	20	14	19	20	20	20	9	20	11	20	20	20	20	21
910	560	546	847	126	747	13	021	259	796	513	513	021	756	114	926	796	521	R32090	796	209	383	274	613	274	15	188	537	796	795	991	Y29910	832
i-digoxin si	i-digoxin sc	c(Fv)-PE	-(Lk)-Vl of a		i-Tac(Fv)-PE4	ti-Tac(Fv)-	pecific tetr	-dansyl si	e scFV fragme	. pipiens r	ipiens recomb	fic tet	ıs single	Murine derived pro	•	ш.	eavy and ligh	۳	ouse scFV fragme	-	Transformant CDM/1	Plasmid pNG4/55.1s	Monoclonal antibod	Fusion protein pNG	Multifunctional pr	o acid sequen	ifunctio	use scFV fra	scFV fragm	MCP-3	uman IP-10 and m	Bispecific anti-ze

## ALIGNMENTS

RESULT W60769

W60769 standard; Protein; 243

AA.

W60769;

08-SEP-1998 (first entry)

Single chain antibody (ScFv) 421 that binds to mutant p53 proteins.

```
DRXX PXX PR
                                                                                                                                                                                                          XGXB
                                                                                                                                                                                                                                                                        XSX
                                                                                                                                                                                                                                                                                                                 Single chain antibody; ScFv 421; mouse; p53 protein; oligomerisation; regulatory domain; p53 mutant; H273; W248; G281; p53-dependent trans-activating activity; restoration; tumour-suppressing activity; tumour_cell; treatment; hyper-proliferation; cancer; re-stenosis; ss.
Restoring p53-dependent trans-activating activity to cell containing mutant p53 - by delivering single-chain antibody specific for the
                                                         WPT; 1998-272149/24.
                                                 N-PSDB; V36236.
                                                                                                                                                                                          27-OCT-1997;
                                                                                                                                                                                                                         07-MAY-1998
                                                                                                                                                                                                                                                                                     Mus sp.
                                                                                              Debussche L,
                                                                                                                                                              29-OCT-1996;
                                                                                                                                                                                                                                                        WO9818825-A1.
                                                                                                                               (RHON ) RHONE-POULENC RORER SA.
                                                                                                Bracco
                                                                                                                                                            96FR-0013176.
                                                                                                                                                                                           97WO-FR01921
                                                                                                Ë
```

895.5

P80154

Biosynthetic antib

Nucleotide sequenc

W37738

```
PAXX FFX XXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches 243;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The present sequence represents a single chain antibody (ScFv) designated 4.21. The antibody binds to an epitope present in the C-terminal region of the p53 protein that includes oligomerisation and regulatory domains, specifically between positions 320 and 393. ScFv 421 is directed against introduced into cells containing a mutant p53 protein, p53-dependent trans-activating activity is restored. ScFv 421 is specific for p53-mutants that have lost tumour-suppressing activity and are present in tumour cells. It is particularly used to treat hyper-proliferation associated with these mutants (e.g. cancer and re-stenosis) but may also be used in vitro for studying mechanisms of activity of p53 or its mutant and to purify or detect p53.
(RHON *) RHONE
                            19-JUL-1995;
                                                     17-JUL-1996;
                                                                                                               WO9704092-A1
                                                                                                                                                      Chimeric - Homo sapiens.
Chimeric - Herpes simplex virus.
                                                                                                                                                                                                  tumour suppression;
                                                                                                                                                                                                             Leucine zipper domain; LZD; oligomerisation domain; mutant; mutesubstitution; replacement; transactivation; viral protein VP16; anti-oncogene; hyperproliferation; cancer; restenosis; SCFV;
                                                                                                                                                                                                                                                                         Human
                                                                                                                                                                                                                                                                                                      25-NOV-1997
                                                                                                                                                                                                                                                                                                                                                          W28491 standard; Protein; 535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mutant,
                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                 241 eik 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Н
                                                                                                                                                                                                                                                                                                                                                                                       N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SGGGGSGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQSP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCNFYGDALDYWGQGTTVTVSSGGGG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGTKL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    apkfqgkatmtadtssntaylqlsslasedtavyycnfygdaldywgqgttvtvssgggg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             qvqlqqsgaelvrsgasvklsctasgfn1kdyymhwvkqrpeqglew1gw1dpengdtey
                                                                                                                                                                                                                                                                     p53 protein variant S-325 encoded by pEC176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      particularly for treatment of tumours
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           243 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                   (first entry)
POULENC RORER SA
                            95FR-0008729
                                                      96WO-FR01111.
                                                                                                                                                                                                 apoptosis; single chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 1289; DB 19;
Pred. No. 2e-83;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                  antibody variable domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                              HSV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                당
                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
XZ
                                                                                                                                                                                                                                                                                                                 δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claimed variants of protein p53 have at least part of the coligomerisation domain deleted and replaced by a leucine zipper domain. The mutants preferably also have at least part of the p53 transactivation domain (amino acids 1-74) deleted and replaced by the transactivating domain (TD) from herpes simplex virus viral protein vP16 (amino acids 411-490) or by a protein domain able to bind selectively to a transactivator, especially a single-chain antibody variable domain (SCFV). The present sequence is that of a specifically claimed p53 variant designated S-325 and comprising a SCFV domain, amino acids 75-325 of human wild-type p53 and a leucine zipper domain at the C-terminal. The p53 variants are
                                                         Leucine zipper domain; LZD; oligomerisation domain; mutant; mutasubstitution; replacement; transactivation; viral protein VP16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              more active and more stable tumour suppressors and apoptosis-inducing agents than wild-type p53 and are active where the wild-type protein is not, i.e. they are not inactivated by dominant negative or oncogen mutants, nor by other cellular proteins (because the leucine zipper domain prevents formation of inactive mixed oligomers).
                           anti-oncogene; hyperproliferation; cancer;
tumour suppression; apoptosis; single chall
                                                                                                            Human
                                                                                                                                                                         W28492;
                                                                                                                                                                                                        W28492 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                         25-NOV-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 36; Pages 88-90; 133pp; French
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     esp. cancer and restenosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New p53 variants e.g. with oligomerisation domain replaced by leucine zipper - useful for treating hyper-proliferative disorders,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bracco L,
                                                                                                                                                                                                                                                                                     243
                                                                                                                                                                                                                                                                                                                  241 EIK 243
                                                                                                                                                                                                                                                                                                                                                  183
                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                              123
                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
les 240; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY
                                                                                                                                                                                                                                       ω
                                                                                                                                                                                                                                                                                   elk 245
                                                                                                                                                                                                                                                                                                                                              sgggggggggdvlmtqtpltlsvtigqpasisckssqslldsdgktylnwllqrpgqsp
                                                                                                                                                                                                                                                                                                                                                                                                                               SGGGGSGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQSP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           apkfqgkatmtadtssntaylqlsslasedtavyycnfygdaldywgqgttvtvssgggg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APKFQGKATMTADTSSNTAYLQLSSLASEDTAYYYCNFYGDALDYWGQGTTVTVSSGGGG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1997-132633/12
                                                                                                          p53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   T86221.
                                                                                                         protein variant S-325H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conseiller
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   535 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                        (first entry)
                                                                                                                                                                                                        Protein; 535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 1277; DB 18
Pred. No. 3.1e-82;
2; Mismatches 1
                                                                                                                                                                                                        Ą
                             chain antibody va
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       535;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  or oncogenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                              mutein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                                                   242
                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                182
```

Chimeric -

Homo sapiens

```
망
                                                                                                                                                                                                                                                                  망
                                                                                                                                                                                                                                                                                                                 οy
                                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claimed variants of protein p53 have at least part of the oligomerisation domain deleted and replaced by a leucine zipper domain. The mutants preferably also have at least part of the p53 transactivation domain (amino acids 1-74) deleted and replaced by the transactivating domain (TD) from herpes simplex virus viral protein vP16 (amino acids 411-490) or by a protein domain able to bind selectively to a transactivator, especially a single-chain antibody variable domain (SCFV). The present sequence is that of a specifically claimed p53 variant designated S-325H and comprising a SCFV domain, amino acids 75-325 of human wild-type p53 (but with Arg182 replaced by His) and a leucine zipper domain at the C-terminal. The p53 variants are more active and more stable tumour suppressors and apoptosis-inducing agents than wild-type p53 and are active where the wild-type protein is not, i.e. they are not inactivated by dominant negative or oncogenic mutants, nor by other cellular proteins (because the leucine zipper domain prevents formation of inactive mixed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chimeric -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New p53 variants e.g. with oligomerisation domain replaced by leucine zipper - useful for treating hyper-proliferative disorders, esp. cancer and restenosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 36; Page -; 133pp; French
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17-JUL-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (RHON ) RHONE POULENC RORER SA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19-JUL-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       W09704092-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (Note: this sequence does not appear in the specification and has been produced by modifying the given sequence of variant V-325).
                       241
                                                                       183
                                                                                                                     181
                                                                                                                                                                      123
                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                     63
                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity 98.1
les 240; Conservative
                                                                                                                                                                                                                                                                                                                                                            KRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGTKL 240
                                                                                                                                                                                                                                                                apkfqgkatmtadtssntaylqlsslasedtavyycnfygdaldywgqgttvtvssgggg
                                                                                                                                                                                                                                                                                         APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCNFYGDALDYWGQGTTVTVSSGGGG 120
                       EIK 243
                                                                     krliylvskldsgvpdrftgsgsgtdftlkinrveaedlgvyycwqgthspltfgagtkl
<u>..</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Herpes simplex virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        95FR-0008729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        96WO-FR01111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note= "Arg residue at position 182 of wild-type
    p53 has been mutated to His"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99.1%;
98.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 1277; D: Pred. No. 3.1e 2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 18;
3.1e-82;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 535;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                     242
                                                                                                                                                                                                                                                                122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
```

Ω

B

Š

γ

```
FT FXX XXX XXX XXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
          The present sequence represents a fusion protein comprising murine canti-Fc alpha raceptor antibody A77 sFv and the transmembrane domain of platelet derived growth factor receptor (PDFR-R TM). It is encoded by expression vector pJG718 (see X58935). Murine tumour cells transformed to express A77-TM were able to bind a soluble form of the Fc alpha receptor, and the bound receptor was able to engage CIGA molecules. This is an example of cells of the invention that the been transformed to express on their surface a component which binds to an Fc receptor of an effector cell. The transformed cell is targeted to an effector cell via the Fc binding component, and can be used asia vehicle to increase an effector cell-mediated at the response, such as cell lysis and phagocytosis, against an artigen associated with the cell. The transformed cells are used to treat cancer and infectious diseases or used as vaccines. The method allows for killing of target cells without targeting any particular antigen on the cell. This is advantageous since many
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Deo YM, Goldstein J,
                                                                                                                                                                                                                                                                                                                                                                                     Cells expressing anti-Fc receptor binding components
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Single chain antibody; scFv; A77; IgA receptor; Fc receptor; Fc alpha receptor; platelet derived growth factor receptor; antibody engineering; cell surface expression; therapy; cancer; tumour; vaccine; human.
                                                                                                                                                                                                                                                                                                                                             Example 6; Fig 10A-E; 68pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1999-371099/31.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 02-DEC-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     02-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10-JUN-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9928349-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chimeric -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Anti Fc alpha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23-AUG-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Y06273;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Y06273 standard; Protein; 353 AA.
tumour cells and other target cells do not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        243 elk 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       receptor scFv A77-PDGR-R TM fusion.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             97US-0067232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "linker"
176..287
"/no+~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98WO-US25556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        304..353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              294..303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    note= "Ig K-chain SP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        note= "A77 VL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'note= "HA epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Graziano R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "PDGFR transmembrane domain"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Myc epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Keler
```

```
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SXC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 188
 The present sequence represents a single chain ar D3M. The antibody binds to an epitope present in of the p53 protein that includes oligomerisation specifically between positions 320 and 393. ScFv
                                                        Claim
                                                                         Restoring p53-dependent trans-activating activity to cell mutant p53 - by delivering single-chain antibody specific mutant, particularly for treatment of tumours
                                                                                                                                                                                                                                             07-MAY-1998
                                                                                                                                                                                                                                                                                                         p53-dependent trans-activating activity; restoration; tumour-suppressing activity; tumour cell; treatment; hyper-proliferation; cancer; re-stenosis; ss.
                                                                                                                                                                                                                                                                                                                                          Single chain antibody; ScFv D3M; mouse; p53 protein; regulatory domain; p53 mutant; H273; W248; G281;
                                                                                                                                                                                                                                                                                                                                                                                                                       W60770
                                                                                                                                                                                                                                                                                                                                                                                                                                          W60770
                                                                                                                                                                                                   29-OCT-1996;
                                                                                                                                                                                                                       27-OCT-1997;
                                                                                                                                                                                                                                                                  WO9818825-A1
                                                                                                                                                                                                                                                                                                                                                                           Single
                                                                                                                                                                                                                                                                                                                                                                                                08-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             for
                                                                                                                                                                           (RHON ) RHONE-POULENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             targeting
                                                                                                                                  1998-272140/24.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VSSGGGSGGGSGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nlkfkgkatltvdkssstaymqlnsltsedsavyycvrgvyyygssyeafpywgqgtlvt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       eiqlqqtgpelvkpgasvkisckasgysftdyiifwvkqshgkslewtgnnnpyygstsy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY ::||||:|||:|||:||||:||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               || |||||||
fgggtkleik
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FGAGTKLEIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QRPGQSPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    vsagggggggggggggggdvvmtqtpltlsitigqpasisckssqslldsdgktylnwll
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYC----NFYG---DALDYWGQGTTVT 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    188;
                                                        'n
                                                                                                                                                                                                                                                                                                                                                                            chain
                                                                                                                                                                                                                                                                                                                                                                                                                                            standard;
                                                        Page 32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AA
                                                                                                                                                                                                   96FR-0013176
                                                                                                                                                                                                                      97WO-FR01921
                                                                                                                                                                                                                                                                                                                                                                                                                                          Protein;
                                                      54pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       76.5%;
                                                                                                                                                                             RORER
                                                                                                                                                                                                                                                                                                                                                                           (ScFv) D3M that binds to mutant p53 proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                            249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23;
                                                                                                                                                                             SA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 985.5;
Pred. No. 5.2e
23; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                            ⋛
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BB
n antibody (ScFv) de
in the C-terminal r
ion and regulatory d
:Fv D3M is directed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                     oligomerisation;
                                                                                       containing for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          353;
                                  designated
            region domains,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2
```

directed against

Example

16;

Page

84-85;

100pp;

English

```
PS X PTT
                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
W82744
ID WE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            88888888xx
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               p53 mutants, particularly H273, W248 and G281 mutants. When the ScFV introduced into cells containing a mutant p53 protein, p53-dependent trans-activating activity is restored. ScFV D3M is specific for p53-mutants that have lost tumour-suppressing activity and are present tumour cells. It is particularly used to treat hyper-proliferation associated with these mutants (e.g. cancer and re-stenosis) but may be used in vitro for studying mechanisms of activity of p53 or its mm and to purify or detect p53.
                   New gene construct expressing conjugate of targeting prodrug-converting enzyme - useful for, e.g. targeted cytotoxic drug in vivo, especially for treatment of c
                                                                                                   Blakey DC,
                                                                                                                                                                                                                                                                                 Conjugate; cell targeting; cytotoxic drug; plasmid; fusion protein; prodrug-converting enzyme; cell surface antigen; treatment; cancer; inflammation; rheumatoid arthritis; antibody; prodrug therapy syste
                                                                   WPI; 1999-059700/05.
                                                                                                                                                           10-MAY-1997;
                                                                                                                                                                                                                                                          Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                        W82744 standard; Protein;
                                                                                                                                                                                                           19-NOV-1998
                                                                                                                                                                                                                                  WO9851787-A2
                                                                                                                                                                                                                                                                                                                                                        10-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                 (ZENE ) ZENECA LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 QVQLQQSGAEI,VRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Match
                                                                                                                                                                                                                                                                                                                                                                                                                               σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SSGGGGSGGGGSGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDS-DGKTYLNWLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APKFQGKATMTADTSSNTAYLQLSSLASEDTAYYYCN-----FYGDALDYWGQGTTVTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   fgggtkleik
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FGAGTKLEIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QRPGQSPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ssggggsggggggggdieltqspsslavsagekvamsckssqslfnsrtrknylawyq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 apnfqgkatvtadtssntaylhlssltsedttvyycnaviyyeydgyaldywgqgttvtv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               qvklqesgaeivrsgasvnlsctasgfn1kdyymhwvkqrpeeg1ew1gy1dpesgetey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               187;
                                                                                                                                                                                                                                                                                                                                protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            249
                                                                                                         Emery SC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                pICI266/8061scFvtag/his
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AA;
                                                                                                                                                           97GB-0009421
                                                                                                                                                                                   98WO-GB01294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           74.6%;
                                                                                                                                                                                                                                                                                                                                                                                                        281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 961;
Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                        ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 19;
.9e-60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                  agent and
d production
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                of p53 or its mutant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8,
                                                                                                                                                                                                                                                                                  system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             may also
                                    of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ť,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  w
-.
```

Ľ

construct

of

ω

```
RESULT
W82745
ID W8
  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        뭕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 174;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           at a cell surface antigen (Ag) recognised by (I). Delivery of (A) to a target site, then administration of (III) is used for targeted release of cytotoxic drug, specifically for treating cancer but also inflammation such as rheumatoid arthritis. In situ generation of the targeting antibody increases selectivity, reducing side effects at normal tissue. The method is applicable to any antibody-directed enzyme prodrug therapy
                                                                                                                                                                                                                                                           Conjugate; cell targeting; cytotoxic drug; plasmid; fusion protein; prodrug-converting enzyme; cell surface antigen; treatment; cancer; inflammation; rheumatoid arthritis; antibody; prodrug therapy syste
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This sequence is a used in a method for obtaining a novel gene constru-
(A) which expresses, in cells of a mammal, a conjugate (B) of a
cell-targeting group (I) and a heterologous prodrug-converting enzyme
(II), and (B) is directed to leave the cell for selective localisation
 New gene
                           WPI; 1999-059700/05
N-PSDB; V72075.
                                                                                                                        10-MAY-1997;
                                                                                                                                                   05-MAY-1998;
                                                                                                                                                                               19-NOV-1998
                                                                                                                                                                                                         W09851787-A2
                                                                                                                                                                                                                                  Synthetic
                                                                                                                                                                                                                                                                                                                   Fusion
                                                                                                                                                                                                                                                                                                                                                10-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                   W82745 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                             (ZENE ) ZENECA LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     83 apkfrgkatltadsssntaylhlssltsedtavyychvliyagylamdywgggtsvavss 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                  7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GQSPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGA 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |||||||
|gtkleik 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCN--FYGD--ALDIWGQGTTVTVSS 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTKLEIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ggggggggggggggivltgspaimsaspgekvtitcsasssv-----tymhwfqqkp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGGSGGGGSGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRP 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gtspklwiystsnlasgvparfsgsgsgtsysltisrmeaedaatyycqqrstypltfga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein (806.077 scFv-CPG2)2.
                                                                   ,
D
construct expressing conjugate of targeting agent and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        281
                                                                   Emery SC;
                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                        97GB-0009421
                                                                                                                                                   98WO-GB01294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              70.78;
                                                                                                                                                                                                                                                                                                                                                                                                      666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 911; DB 20;
Pred. No. 6.8e-57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10;
                                                                                                                                                                                                                                                            system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ω
```

```
RESULT
R75719
                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                          맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      γg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match

Best Local Similarity

Matches 174; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (A) which expresses, in cells of a mammal, a conjugate (B) of a cell-targeting group (I) and a heterologous prodrug-converting enzyme (II), and (B) is directed to leave the cell for selective localisation at a cell surface antigen (Ag) recognised by (I). Delivery of (A) to a target site, then administration of (III) is used for targeted release of cytotoxic drug, specifically for treating cancer but also inflammation such as rheumatoid arthritis. In situ generation of the targeting antibody increases selectivity, reducing side effects at normal tissue. The method is applicable to any antibody-directed enzyme prodrug therapy
                                                                                         Region
                                                                                                                                                           Кеу
                                                                                                                                                                                                                                                                                                                             R75719 standard; Protein; 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            prodrug-converting enzyme - useful for, e.g. targeted production
cytotoxic drug in vivo, especially for treatment of cancer
                                                              Region
                                                                                                                                           Region
                                                                                                                                                                                    Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This sequence is a used in a method for obtaining a novel (A) which expresses, in cells of a mammal, a conjugate (B)
            Region
                                     Region
                                                                                                                   Region
                                                                                                                                                                                                                           Antibody; MFE-23; carcinoembryonic antigen; CEA; colorectal tumour;
                                                                                                                                                                                                                                                    MFE-23 antibody
                                                                                                                                                                                                                                                                               26-JAN-1996 (first
                                                                                                                                                                                                                                                                                                          R75719;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     system.
                                                                                                                                                                                                             therapy;
                                                                                                                                                                                                                                                                                                                                                                                                  254
                                                                                                                                                                                                                                                                                                                                                                                                                                                          194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               140
                                                                                                                                                                                                                                                                                                                                                                                                                                237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 μ
                                                                                                                                                                                                                                                                                                                                                                œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                         APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCN--FYGD--ALDYWGQGTTVTVSS 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY
                                                                                                                                                                                                                                                                                                                                                                                                     gtkleik 260
                                                                                                                                                                                                                                                                                                                                                                                                                                GTKLEIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGGSGGGGSGGGSDVLMTQTPLTLSVTTIGQPASISCKSSQSLLDSDGKTYLNWLLQRP 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                evqlqqsgaelvrsgasvklsctasgfnikdnymhwvkqrpeqglewiawidpengdtey 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GOSPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ggggsggggggggqivltqspaimsaspgekvtitcsasssv----tymhwfqqkp
                                                                                                                                                                                                                diabody.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           666 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Page 87-89;
                                                             /note=
27..51
                                                                                         /note=
162..2
                                                                                                                   /note=
27..140
                       52..61
/note=
                                                                                                                                             Location/Qualifiers 27..267
                                                  /note= "FR H1"
/note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           70.7%; Score 911; DB 20; 70.4%; Pred. No. 1.7e-56; tive 27; Mismatches 36;
                                                                                            267
                         "CDR H1
                                                                                                                                "variable region"
                                                                                                       "variable heavy chain"
"FR H2"
                                                                            "variable light chain"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27;
                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               193
                                                                                                                                                                                                                                                                                                                                                                                                                                                            253
```

```
밁
                        Qy
                                                                                                                                              This sequence represents the MFE-23 antibody, which is an antibody against carcinoembryonic antigen (CEA). CEA is a marker antigen for cancer imaging and therapy. The MFE-23 antibody sequence was obtained using phage technology. In this process, mice were immunised with CEA.

The antibody variable region genes obtained from these mice were then amplified from cDNA and cloned as a single chain FV (scFV) into bacteriophage vectors, producing a library. The phages that bound to bacteriophage vectors, producing a library. The phages that bound to bacteriophage vectors are selected and amplified, and this sequence (and the encoding cDNA) were selected. This sequence was found to have good specificity and affinity for CEA, meaning that it can be used in targeted anti-tumour therapies. A humanised antibody with the complementarity determining regions of MFE-23 may be produced by CDR grafting. The antibody may be used for the treatment by surgery or therapy of a colorectal tumour. WFE-23 may also be used to make diabodies (bivalent or bispecific antibody in the produced by colorectal tumour. MFE-23 may also be used to make diabodies (bivalent or bispecific antibody antibody and may be linked to an antibody with the complements.
                                                  Matches 173;
                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                        Antibody for carcinoembryonic antigen - of colorectal cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Region
                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                 Claim 3; Page 48-49;
                                                                                                                                                                                                                                                                                                                                                                                                                              N-PSDB; Q90663.
                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1995-215234/28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Begent RHJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (CANC-) CANCER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   03-DEC-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         05-DEC-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 08-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO9515341-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Region
   27
                           Н
agent or a detectable label.
                                                                                                                270 AA;
                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RES CAMPAIGN TECHNOLOGY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   93GB-0024807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         94WO-GB02658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     249.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                76..85
/note=
86..12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note- "1
185..194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note= "
147..161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note=
217..2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  136..146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 195..209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 162..184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             note-
                                                              70.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .216
                                                                                                                                                                                                                                                                                                                                                                 72pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       . 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               . 248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "CDR H2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "CDR L3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "FR L3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "CDR L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "FR L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "linker"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "FR L4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "CDR L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "FR L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "FR H4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "CDR H3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "FR H3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hawkins RE;
                                                 26;
                                                 Score 906; DB 16;
Pred. No. 1.5e-56;
6; Mismatches 35;
                                                                                                                                                                                                                                                                                                                                                                                                     for treatment and diagnosis
                                                                        Length 270;
                                                  Indels 16;
                                                 Gaps
                                                  ω
```

```
RESULT W11508
ID W11508
AC W11
XX W11
XX W1
XX W1
XX W1
XX Si
XX Hu
XX Ch
OSS Ch
OSS Ch
OSS Sy
FFT Peg
FFT Peg
FFT Peg
FFT Peg
FFT Rec
FFT Rec
FFT Rec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                          11 H H H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                Region
                                                                                                                       Region
                                                                                                                                                                         Domain
                                                                                                                                                                                                                                                                         Region
                                                                                                                                                                                                                                                                                                                           Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                       Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Humanised antibody; anti-Fc receptor; H22; bifunctional; bispecific; fusion protein; chimera; carcinoembryonic antigen; CEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           W11508 standard; Protein; 553
19-DEC-1996
                                                                                               Peptide
                                                                                                                                                                                               Region
                                                                                                                                                                                                                                                  Domain
                                                                                                                                                                                                                                                                                                                                                  Region
                                                                                                                                                                                                                                                                                                                                                                                                   Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chimeric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chimeric -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Single chain anti-Fc gamma RI antibody fused to anti-CEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24-SEP-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    W11508
                       WO9640789-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                          Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             fusion protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      174 QRPGQSPKRLïYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      114 VSSGGGGSGGGGGGGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLL 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         144 vssggggsggggggggsenvltqspaimsaspgekvtitcsasssv-----symhwfq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCN-----FYGDALDYWGQGTTVT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FGAGTKLEIK. 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         apkfqgkatfttdtssntaylqlssltsedtavyycnegtptgpyy---fdywgqgttvt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        qkpgtspklw::ystsnlasgvparfsgsgsgtsysltisrmeaedaatyycqqrssyplt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        fgagtklelk 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                        521..533
                                                                                                                                                                         412..520
                                                                                                                                                                                                                                                                         267..276
                                                                                                                                                                                                                                                                                                                                                   140:.154
                                                                                                                                  /label= MFE-23_VL
/note= "Anti-CEA antibody MFE-23
domain"
                                                                                                                                                                                                  397..411
                                                                                                                                                                                                                                                                                                                                                            /label= H22_VH
/note= "Anti-Fc gamma RI antibody H22 heavy chain
variable domain"
                                              /label= His-6_tail
/note= "6 histidine residues"
                                                                                                 /label= linker
534..544
                                                                                                                                                                                                           /label= MFE-23_VH /note= "Anti-CEA antibody MFE-23 heavy chain variable domain"
                                                                                                                                                                                                                                                277..396
                                                                                                                                                                                                                                                                                                                                                                                                             /label= signal_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                     /label= linker
                                                                                                                                                                                                                                                               /label- linker
                                                                                                                                                                                                                                                                                                   note= "Anti-Fc
                                                                                                                                                                                                                                                                                                               /label- H22_VL
                                                                                                                                                                                                                                                                                                                                      /label= linker
                                                                        label= c-myc_tag
48..553
                                                                                                                                                                                                                                                                                                                           . 266
                                                                                                                                                                                                                                                                                     variable
                                                                                                                                                                                                                                                                                     e domain"
                                                                                                                                                                                                                                                                                                   antibody H22 light chain
                                                                                                                                                 light chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  antibody.
                                                                                                                                                 variable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          197
```

07-JUN-1996;

88660sn-0M95

```
RESULT
W73223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ID XXX AC XXX AC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δδ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                          Multispecific single chain antibody; antibody H22; tumour cell; therapy; antibody-dependent cellular cytotoxicity; ADCC; HER 2/neu; infection; epidermal growth factor receptor; breast cancer; ovarian cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A mammalian expression construct encoding a single chain antibody having binding specificity for Fc gamma RI, derived from the humanised anti-Fc gamma RI monoclonal antibody H22 was prepared (see T58129). A bispecific single chain polypeptide was produced by fusing the H22 SCFV to an anti-carcinoembryonic antigen (CEA) antibody. The H22-anti-CEA fusion protein was shown to bind both Fc gamma RI and CEA.
07-JUN-1996;
                                                        17-NOV-1998
                                                                                                              US5837243-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Recombinant, multi-specific anti-Fc receptor antibody molecules also comprise an anti-target portion, used for the treatment of cancer, autoimmune disease and pathogenic infection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                               H22-anti-CEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       W73223 standard; Protein; 553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                     25-JAN-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 8; Fig 40; 115pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1997-052242/05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (MEDA-) MEDAREX INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            278 iklqqsgaelvrsgtsvklsctasgfnikdsymhwlrqgpeqglewigwidpengdteya 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gagtklelk 517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCN-----FYGDALDYWGQGTTVTV 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEYA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGTKLEIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SSGGGGSGGGGSGVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQ 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ssggggsgggggggggenvltqspaimsaspgekvtitcsasssv-----symhwfqq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                pkfqgkatfttdtssntaylqlssltsedtavyycnegtptgpyy---fdywgqgttvtv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Goldstein J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              553 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                               antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  95US-0484172.
96US-0661052.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         69.8%; Score 900; DB 18; Length 68.7%; Pred. No. 8e-56;
                                                                                                                                                                                                                                                                                                                                            construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Graziano
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27;
                                                                                                                                                                                                                                                                                                                                               321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ₽,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Somasundaram
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ψ
```

```
RESULT
P80154
δÃ.
                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     antibody-dependent cellular cytotoxicity (ADCC) against a tumour cell which is characterised by overexpression of HER 2/neu or epidermal growth factor receptor (EGFR), comprises contacting the tumour cell with a multispecific protein molecule (preferably a single chain antibody) comprising: (a) an anti-Fc receptor antibody or an antigen binding fragment; (b) a portion which binds to HER 2/neu; and (c) a portion which binds to ager. The method can be used for treating cancers especially breast cancer or ovarian cancer. The multispecific antibody can also be administered prophylactically to vaccinate a subject against infection
                          Biosynthetic antibody binding site; multifunctional protein.
                                                                     Biosynthetic
                                                                                                   01-JAN-1980
                                                                                                                          P80154;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              anti-CEA antibody and a multispecific single chain antibody designated H22. The antibody can be used in the method of the invention for inducing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a target
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Specific killing of tumour cells - using a multi-specific molecule comprising an anti-Fc receptor antibody and a portion which binds to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       07-JUN-1996; 1
07-JUN-1995;
                                                                                                                                                           P80154 standard; protein; 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              by a target cell.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example 8; Fig 40; 57pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 1999-023374/02
N-PSDB; V08176.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Deo YM,
                                                                                                                                                                                                                                      509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (MEDA-) MEDAREX INC
                                                                                                                                                                                                                                                                  235
                                                                                                                                                                                                                                                                                                  449
                                                                                                                                                                                                                                                                                                                                                          395
                                                                                                                                                                                                                                                                                                                                                                                      115
                                                                                                                                                                                                                                                                                                                                                                                                                    338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            278 iklqqsgaelvrsgtsvklsctasgfnikdsymhwlrqgpeqglewigwidpengdteya 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                            ㅁ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 VQLQOSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEYA 61
                                                                                                                                                                                                                         gagtklelk 517
                                                                                                                                                                                                                                                                  GAGTKLEIK 243
                                                                                                                                                                                                                                                                                               kpgtspklwiystsnlasgvparfsgsgsgtsysltisrmeaedaatyycqqrssypltf 508
                                                                                                                                                                                                                                                                                                                                                                                                                                   PKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCN-----FYGDALDYWGQGTTVTV 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       171;
                                                                                                                                                                                                                                                                                                                             RPGOSPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTF 234
                                                                                                                                                                                                                                                                                                                                                       ssggggsgggggggggenvltqspalmsaspgekvtitcsasssv-----symhwfqq
                                                                                                                                                                                                                                                                                                                                                                                      SSGGGGSGGGGSGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQ 174
                                                                                                                                                                                                                                                                                                                                                                                                                  pkfqgkatfttdtssntaylqlssltsedtavyycnegtptgpyy---fdywgqgttvtv
                                                                                                                                                                                                                                                                                                                                                                          celil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Goldstein J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   553 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                     antibody binding
                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             represents the construct 321, which is a fusion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       96US-0661052.
95US-0484172.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      69.8%;
68.7%;
                                                                                                                                                                                                                                                                                                               Graziano
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 900; DB 2
Pred. No. 8e-56;
                                                                     site.
                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                        framework region; assay;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Somasundaram
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16;
                                        imaging
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                         448
                                                                                                                                                                                                                                                                                                                                                                                                                    394
```

ω

WO8809344-A

```
RESULT
W37738
ID W3
XX *
AC W3
XX
OT 07
                                                                                                                                                                                                                DЬ
                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                 Дb
                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                               δã
                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                           QΥ
                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The biosynthetic antibody binding site forms part of a recombinant CC multifunctional protein which also comprises an effector protein, an AA CC acid sequence capable of sequestering an ion, or a sequence capable of CC binding to a solid support. The BABS comprises the framework region from CC murine anti-digoxin monoclonal antibody 26-10-heavy chain variable region and the complementarity determining region from G-loop-4 heavy chain comprises the framework region CC variable region and has lysosyme specificity. The effector protein is an CC enzyme, toxin, receptor, binding site, growth factor, cytokine CC calmodulin or metallothionein. The sequence capable of sequestering an ion is CC calmodulin or metallothionein. The sequence capable of binding to solid support is streptavidin or a protein A fragment. The protein may be used Cf for, eg specific binding assays, affinity purificn., biocatalysts, drug CC targetting, imaging and immunological treatment of oncogenic etc.

CC diseases. The protein offers fewer cleavage sites to circulating contractive and are cleared quickly from the body when also have reduced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 167
 07-JUL:1998
                                  W37738;
                                                                 W37738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-DEC-1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Recombinant multifunctional protein - having antibody binding sequence for biological activity, ion sequestering or binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           19-MAY-1988;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; ; 15pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (CREA-) CREATIVE BIOMOLECULES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21-MAY-1987;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               apidly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .mmunogenicity.
                                                                                                                                                 240
                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                  177
                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                  117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                                                  63
                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                 12
                                                                                                                                                                                                                                                                                                                                                                                                                ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                \vdash
                                                                                                                                                                                                                                                                                                                                             nenfkgkatltvdkssstaymelrsltsedsavyycarythyy---fdywghgasvtvss 119
                                                                                                                                                                                                                                                                                                                                                                APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYC----NFYGDALDYWGQGTTVTVSS 116
                                                                                                                                                                                                                                                                                                                                                                                                                                               QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1988-353928/49
DB; N80180.
                                                                                                                                               gtkleik 246
                                                                                                                                                                                GTKLEIK 243
                                                                                                                                                                                                                gqspklliykvsnrfsgvpdrfsgsgsgtdftlkisrveaedlgiyycfqgshvpwtfgg 239
                                                                                                                                                                                                                                   GQSPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGA 236
                                                                                                                                                                                                                                                                              ggggsggggggggggdvvmtqtplslpvslgdqasiscrssqsivhsngntylewylqka 179
                                                                                                                                                                                                                                                                                               GGGGSGGGGSGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRP 176
                                                                                                                                                                                                                                                                                                                                                                                                              evqlqqsgpelvkpgasvrmsckssgytftnyyihwlkqshgkslewigwiypgngntky
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              support
                                                                 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and are cleared quickly from the body.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                249 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
 (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             87US-0052800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             88WO-US01737
                                                               Protein; 437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             69.5%; Score 895.5; 67.6%; Pred. No. 7.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .3e-56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            They also have reduced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                249;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              site
to a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                62
                                                                                                                                                                                                                                                                                                                                                                                                                                               60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2;
```

```
В
                                                                             Ϋ́
                                                                                                                                   γQ
                                                                                                                                                                                                 Ş
                                                                                                              멍
                                                                                                                                                                      밁
                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                8 x 000000000 x 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                      This is the amino acid sequence of a fusion protein comrising of Mgr6 single chain antibody (with the heavy and light chain joine a linker), fused to the clavin protein. Clavin is an inhibitor protein, and functions by inactivating the ribosomes. Clavin or conjugates are useful as antibiticancer and/or antiviral agents. The recombinant ribosomal inhibitor protein (RIP), Mgr6-clavin (a conficiency) is used as an immunoconjugate, and the complex and cl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 4; Pages 14-15; 26pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA encoding Aspergillus clavatus-derived ribosomal protein, clavin - useful as an immuno-conjugate and
                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                          alone are capable of inhibiting ribosomal activity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1998-077109/07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Colnaghi M, De Santis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  31-DEC-1997.;:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chimeric -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chimeric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (ITUY-) ITAL MIN UNIV RICERCA SCI & TECNOLOGICA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27-JUN-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           кеу
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nucleotide sequence encoding the Mgr6-clavin immunotoxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Peptide
276 klelk 280
                         239 KLEIK 243
                                           216 ppkllikyasnlesgvparfsgsgsgtdftlnihpveeedtatyycqhsweiprtfgggt
                                                                                                                                            119
                                                                                                                                                                        97
                                                                                                                                                                                                   61
                                                                                                                                                                                                                                 37
                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                              ۳
                                                                                                             ggsgggggggggyieltqspaslavslgqratiscrasqs-vstsrysymhwyqqkpgq
                                                                                                                               GGSGGGGSGGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQ 178
                                                                                                                                                                      dpkfqgkatitadtssntaylqlssltsedtavyycargeydypfpywgqgtsvtvssgg
                                                                                                                                                                                                   APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYC--NFYGDALDYWGQGTTVTVSSGG 118
                                                                                                                                                                                                                                QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY 60
                                                                                   SPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               V09256.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   synthesis;
                                                                                                                                                                                                                                                                                                                                                                437 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Aspergillus clavatus Mus musculus
                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ribosomal inhibitor protein; RIP; clavin; inhibition; thesis; conjugate; Mgr6-clavin; anticancer; antiviral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ./note= "Mgr6 from M. musculus"
.*287..437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             97WO-EPQ3359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   96IT-F100155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note= "Clavin from A. clavatus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                     68.8%; Score 886.5; DB 170.2%; Pred. No. 5.6e-55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mele A,
                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Parente
                                                                                                                                                                                                                                                                                                                    DB 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 anticancer; antiviral agent
                                                                                                                                                                                                                                                                                           44;
                                                                                                                                                                                                                                                                                                                    Length 437;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     inhibitor for treatment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ing of the
                                                                                                                                                                                                                                                                                                                                                                                                         (a conjugate and clavin
                                                                                                                                                                                                                                                                                         ω,
                                                                                                                                                                                                                                                                                                                                                                                                                                                  or its
                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                        156
                                                        275
                                                                                   238
                                                                                                                215
                                                                                                                                                                                                                                 96
```

```
QΥ
                                                                         В
                                                                                                                                                                                                                                          밁
                                                                                                          δÃ
                                                                                                                                                                                                                                                                                         an antibody which specifically interacts with the extracellular domain of the human zeta-chain. The antibody whose CDR of a variable region is encoded by (1), is obtained by immunising a rat with jurkat cells and consequently with a conjugate comprising a carrier molecule and a peptide having 11 N-terminal amino acids of a rat zeta-chain. The cantibody is useful for the treatment and prevention of autoimmune diseases, immune deficiencies, T-cell malignancies, confectious diseases and the suppression of immune response preferably in corrections of graft rejection after organ transplantation, malignancies, cor viral infections. The antibody, and fragments of it, can be useful for the enhancement or suppression of NK-cell dependent immunity or for the treatment of NK-cell derived malignancies. It can also be useful for the current of NK-cell derived malignancies. It can also be useful for the current of the cell derived malignancies. It can also be useful for the contraction of zeta-chain or eta-chain expression on NK-cells.

T-lymphocytes or their precursors. The present sequence represents a bispecific anti-zeta-chain/anti-zecahain expression on xK-cells.
                                                                                                                                               Query Match
Best Local Sim
Matches 179;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present invention describes a nucleic acid molecule (I) encoding at least one complementary determining region (CDR) of a variable region of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             autoimmune infectious
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rattus norvegicus.
Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bispecific anti-zeta-chain/anti-EpCAM antibody protein sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Y78328;
                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2000-160926/14.
N-PSDB; Z88358.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         09-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              04-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Y78328 standard; Protein; 532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example 9; Page 74-76; 79pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New oligonucleotide, polypeptide, antibody useful for treating autoimmune disease, immune deficiencies, T-cell malignancies and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Reiter C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10-JUL-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200003016-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             complementary determining region; CDR; autoimmune disease; cytostatic;
immune deficiency; T-cell malignancy; infectious disease; antiviral;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Anti-zeta-chain antibody 2-B-5; rat; human zeta chain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (CONN-) CONNEX GMBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20-JAN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          immunosuppressive;
   202
                                                                         142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13
             Local Similarity
                                                                                                          1 QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY 60
nqkfngkatltadkssstaymqlssltsedsavyfcardwhyyssyirpfaywgqgtlvt
                                                                   qvqlqqsgaelvkpgssvkisckasgytftsydmhwikqqpgnglewigwiypgngntky 201
                                                                                                                                                                                                                                            532
                                                                                                                                                                                                                                                                               invention.
                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98EP-0112867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99WO-EP04838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            antimicrobial; immune response modulator; NK-cell
                                                                                                                                                                  67.48;
47.28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   determining region (CDR) of a variable region of
                                                                                                                                               27;
                                                                                                                                                                  Score 869; DB 21;
Pred. No. 1.1e-53;
                                                                                                                                                 Mismatches
                                                                                           Length 532;
                                                                                                                                               Indels 136;
                                                                                                                                               Gaps
                                    96
                                                                                                                                               2
```

```
X 20 0 X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δõ
            and a tumour antigen or HIV antigen. Specifically claimed fusion proteins comprise: (1) human monocyte chemotactic protein-3 (MCP-3) and human Muc-1; (2) human interferon-induced protein 10 (IP-10) and human Muc-1; (3) human macrophage-derived chemokine (MJC) and human Muc-1; (4) human SDF-1 and human Muc-1; (5) human IP-10 and HIV gpl20; (6) human MCP-3 and HIV gpl20; (7) human MDC and HIV gpl20; and (8) human SDF-1 and HIV gpl20. The fusion proteins, and nucleotide sequences encoding them, can be used for producing an immune response, e.g. an effector T cell immune response. They can also be used for treating cancer or treating or preventing HIV infection. The fusion proteins and/or nucleotide sequences can be used in in vitro diagnostic assays, as well as in screening assays for identifying unknown tumour antigen epitopes and fine mapping of tumour antigen epitopes. The present sequence represents a fusion protein
                                                                                                                                                                                                                  The present invention describes fusion proteins comprising a chemokine and a tumour antigen or HIV antigen. Specifically, alarmatically and a chemokine and a tumour antigen or HIV antigen.
                                                                                                                                                                                                                                                                  Disclosure; Page 114-115; 142pp; English.
                                                                                                                                                                                                                                                                                                                     New fusion polypeptides comprising a chemokine and
                                                                                                                                                                                                                                                                                                                                                                         WPI; 1999-551418/46.
                                                                                                                                                                                                                                                                                                                                                                                                           Kwak LW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16-SEP-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO9946392-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chemokine; tumour;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human IP-10 and murine scrv20A fusion protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17-NOV-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Y29910 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                          (USSH ) US DEPT HEALTH & HUMAN SERVICES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WQGTHSPLTFGAGTKLEIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       vwgqgttvtvssggggsggggggggselvmtqtplslpvslgdqasiscrssqslvhsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            YWGQGTTVTVSSGGGGSGGGGGGGGDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GKTYLNWLLQRPGQSPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYC 224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              vssggggsevallegsgaelarpgasvklsckasgytftnyglswvkgrpgqvlewigev 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           yprignayynekfkgkatltadkssstasmelrsltsedsavyfcarrgsydtnydwyfd 38:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                response; HIV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            present
                                                                                                                                                                                                                                                                                                                                                                                                         Biragyn A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ----;NFYGDA---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98US-0077745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99WO-US05345
   invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                viral; antigen; fusion protein; cancer; vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                infection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          or preventing HIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 96
```

Sox

Sequence

348

3

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 160
and a tumour antigen or HIV antigen. Specifically claimed fusion proteins comprise: (1) human monocyte chemotactic protein-3 (MCP-3) and human "MC-1; (2) human interferon-induced protein 10 (IP-10) and human Muc-1; (3) human macrophage-derived chemokine (MDC) and human Muc-1; (4) human SDF-1 and human Muc-1; (5) human IP-10 and HIV gp120; (6) human MCP-3 and HIV gp120; (7) human MDC and HIV gp120; and (8) human SDF-1 and HIV
                                                                                                                                         New fusion polypeptides comprising a chemokine HIV antigen, used for treating cancers or treat
                                                                                                                                                                                                          Kwak LW,
                                                                                                                                                                                                                                                                                                                                                                                                                          Chemokine; tumour;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human MCP-3
                                                                                                       Disclosure;
                                                                                                                                                                                 WPI; 1999-551418/46.
                                                                                                                                                                                                                                                           12-MAR-1998;
                                                                                                                                                                                                                                                                                                             16-SEP-1999
                                                                                                                                                                                                                                                                                                                                     WO9946392-A1
                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17-NOV-1999
                                                                                                                                                                                                                                (USSH ) US DEPT HEALTH & HUMAN SERVICES
                                                                                                                                                                                                                                                                                    12-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Y29912 standard; Protein; 361 AA
                                                                                                                                                                                                                                                                                                                                                                                                               immune response;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        μ
                                                                present invention describes fusion proteins comprising a chemokine a tumour antigen or HIV antigen. Specifically claimed fusion proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ggsgggggggggdvvmtqtplslavslgdhvkmscrcnqslvnshgdsflhwflqkpgq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           klevk 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KLEIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGSGGGGSGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQ 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nadfktpatltvdrpsntaylelsnltsgdsavyycsisgdysacdywgqgteltvssgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCNFYGD--ALDYWGQGTTVTVSSGG 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGT 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  160;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity 65.3
60; Conservative
                                                                                                                                                                                                       Biragyn A;
                                                                                                     Page 116-117; 142pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                         98US-0077745
                                                                                                                                                                                                                                                                                  99WO-US05345
                                                                                                                                                                                                                                                                                                                                                                                                                                                    murine scFv20A fusion protein
                                                                                                                                                                                                                                                                                                                                                                                                                         viral; antigen; fusion protein; cancer; vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            67.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 866; DB 20;
Pred. No. 1.2e-53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                         okine and treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 348;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                         a tumour antigen or or preventing HIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ?:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1;
```

Search completed: February 12, 2001, 15:23:21 Job time: 36 sec

```
Ş
                                                        밁
                                                                                 δÃ
                                                                                                                                         ν̈́ο
                                                                                                                                                                      В
                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                               88888888%&
                                                                                                                멍
                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                      gp120. The fusion proteins, and nucleotide sequences encoding them, can be used for producing an immune response, e.g. an effector T cell immune response. They can also be used for treating cancer or treating or preventing HIV infection. The fusion proteins and/or nucleotide sequences can be used in in vitro diagnostic assays, as well as in screening assays for identifying unknown tumour antigen epitopes and fine mapping of tumour antigen epitopes. The present sequence represents a fusion protein
                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                            from the present invention.
351
                         239
                                                        291
                                                                                    179
                                                                                                                231
                                                                                                                                           119
                                                                                                                                                                        171
                                                                                                                                                                                                                                111
                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                           1 QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY 60
                                                      spklliykvssrffgvperfsgsgsgtdftleisrveaedlgvyfcsggahvpwtfgggt
                                                                                                                                                                     klevk 355
                         KLEIK 243
                                                                                                                             GGSGGGGSGG(;GSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQ
                                                                                                                                                                                                   APKFQGKATM...ADTSSNTAYLQLSSLASEDTAVYYCNFYGD--ALDYWGQGTTVTVSSGG
                                                                                    SPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGT
                                                                                                             ggsgggggggggdvvmtqtplslavslgdhvkmscrcnqslvnshgdsflhwflqkpgq
                                                                                                                                                                                                                                                                                         160;
                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                361 NA;
                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                    67.2%;
                                                                                                                                                                                                                                                                                        37;
                                                                                                                                                                                                                                                                                                     Score 866;
Pred. No. 1
                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                     DB 20;
.2e-53;
                                                                                                                                                                                                                                                                                         46;
                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                         ۲,
                                                                                                                                                                                                                                                                                         Gaps
                                                                                    238
                                                                                                                                           178
                                                                                                                                                                                                    118
                                                                                                                290
                                                                                                                                                                        230
                                                         350
                                                                                                                                                                                                                                                                                         ۲
```

THIS PAGE BLANK (USPTO)

```
Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                  ő
                                                                                                                                                                                                          score greater than or equal to the score of the result being and is derived by analysis of the total score distribution
                     1289
1277
970.5
961
                                                                                                              Score
   930.5
                                     100.0
99.1
75.3
                                                                                                                                                                                                                       is the number of results predicted by chance to have a ter than or equal to the score of the result being printed,
                                                                                                              Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pending_Patents_AA: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        924906 seqs, 150866555 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-297-181-2
1289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    February 12, 2001, 15:22:50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 QVQLQQSGAELVRSGASVKL...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GenCore version 4.5
Copyright (c) 1993 - 2000 Com
                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                          /ptodata/2/paa/US08_NEW_COMB.pep:*
                                                                                                                                                                                                                                                                                                                                        /ptodata/2/paa/PCT_NEW_COMB.pep:*
/ptodata/2/paa/US06_NEW_COMB.pep:*
/ptodata/2/paa/US07_NEW_COMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /ptodata/2/paa,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ptodata/2/paa,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /ptodata/2/paa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /ptodata/2
                                                                                                                  DB
US-09-297-181-2

US-08-983-035-38

US-09-419-788-113

US-09-297-181-4

US-09-559-019-28
                                                                                                                                                                        SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .....CWQGTHSPLTFGAGTKLEIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            477.351 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Search time 76.8 Seconds (without alignments)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    924906
                                                                                                              Description
               Sequence 2, Appli
Sequence 38, Appl
Sequence 113, App
Sequence 4, Appli
   Sequence
```

·	4:	4.	Α.	42	4.	4	3	38	ω	36	ω	34	ω	ω	ω	ω	22	28	Ŋ	26	2	2	Ŋ	Ŋ	2	20	1.5	15	_	1	15	1.	<u></u>	Н	11	<u></u>		_	~1	_
	. ·	801	m	805	805	805	805	809	809	m	815	82	828	828	828	828	828	828	828	œ	m	833	m	m	854	m	m	875	m	m	892	892	892	w		· ·	900	900	ιo	926
		ν.	۲.	2	۲.	2		2	۲.	·	ω	64.3	٠.		4				٠.	٠.	.*-	٠	64.7	5	<u>م</u>	7.	7.	7.	9	9	9	9.	φ.	٥	9	9	9	69.9	0	
	ω	σ	S	5	S	ū	S	σ	σ	8	8	248	4	4	4	4	4	4	4	4	g	7	7	4	4	g	4	σ	σ	ū	7	7	4	S	ū	5	7	7	S	4
	18	16	18	12	œ	ഗ	<b>-</b>	22	14	18	14	7	7	16	11	7	7	7	7	13	19	19	19	16	19	20	20	18	<b>—</b>		27	27	27	27	19	17	27	27	نم	19
	-09-431-213-	09-293-533	-09-468-029-6	S-08-838-521-	-08-440-764-	08-134-556-6	T-US94-11411-	S-60-045-409-13	S-09-070-408-1	-09-468-029-5	S-09-025-769B-	0	-08-331-396C-3	5-09-227-693-3	S-08-759-804-	-08-331-398-3	-08-331-397-3	-08-331-396A-	-08-331-396-34	S-08-996-140-	09-594-985A-	S-09-594-985A	S-09-594-985A-	9-202-000-1	S-09-594-985A-	-09-646-028	S-09-646-028-1	-09-419-788-3	S00-19843-8	-US00-19843-15	S-09-523-095A-	09-523-095A-3	S-09-523-095A-4	S-09-188-082-1	S-09-523-279-1	364-088-1	S-09-523-095A-	S-09-523-095A-3	T-US00-19843-1	-559-019-2
	equence 8, Appl	equence 66, Ap	equence 60, App	equence 6, 1	equence 6, Ap	equence 6, A	quence 6, Ap	132,	132,	58,	equence 178,	34,	equence 34, 1	ce 34,	Sequence 34, Ap	equence 34, App		equence 34, App	equence 34, Appl	equence 23, Ap	e 4, App	7, App	6, Appl	14,	5, 2	14,	12,	Sequence 30,	e 8,	quence 15, F	equence 32,	34,	equence 40,	equence 16,	e 16,	equence 16, App	equence 26,	ce 30, App	quence 11, A	7, Ap

## ALIGNMENTS

```
; TYPE: PRT; ORGANISM: Mus musculus US-09-297-181-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 1
US-09-297-181-2
                                                                                                                                               SOFTWARE: Patentin
SEQ ID NO 2
LENGTH: 243
 Matches 243;
                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 2, Application US/09297181 GENERAL INFORMATION:
                                                                                                                                                                                                                                         EARLIER APPLICATION NUMBER: PCT/FR97/01921
EARLIER FILING DATE: 1997-10-27
EARLIER APPLICATION NUMBER: FR96/13176
                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: US/09/297,181
CURRENT FILING DATE: 1999-04-26
                                                                                                                                                                                                        NUMBER OF SEQ ID NOS: 4
                                                                                                                                                                                                                           EARLIER FILING DATE: 1996-10-29
                                                                                                                                                                                                                                                                                                                                    FILE REFERENCE: ST96030-US
                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Debussche, Laurent
FITLE OF INVENTION: ANTI-P53 SINGLE-CHAIN ANTIBODY FRAGMENTS AND THEIR USES
                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Bracco, Laurent
 Conservative
                                                                                                                                                                                    Ver. 2.0
                   100.0%;
                 Score 1289; DB 16;
Pred. No. 1.3e-102;
Mismatches
 0
Indels
                                   Length 243;
0;
Gaps
 0
```

1 QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY 60

```
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ş
                                                                                                                                ; MOLECULE TYPE: US-08-983-035-38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-983-035-38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 38, Applicat GENERAL INFORMATION:
                                                Matches
                                                                                                                                                                                                                                                                          APPLICATION NUMBER: WO F796/01111
FILING DATE: 17-JUL-1996
ATTORNEY_AGENT INFORMATION:
NAME: Savitzky Esq., Martin F.
REGISTRATION NUMBER: 29,699
REFERENCE_MOCKET NUMBER: ST95044-US
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                            TELEFAX: (610) 454-3808 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: CONSEILLER, Emmanuel
APPLICANT: BRACCO, Laurent
TITLE OF INVENTION: P53 PROTEIN VARIANTS AND THERAPEUTICAL
TITLE OF INVENTION: USES THEREOF
NUMBER OF SEQUENCES: 59
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION UNMBER: FR 95/08729
FILING DATE: 19-JUL-1995
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDIUM TYPE: floppy disk
COMPOTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                           TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STATE: F
                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                   ŀ
                                                                                                                                                               TOPOLOGY:
                                                                                                                                                                                                                                                           TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGTKL 240
QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SGGGSGGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQSP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCNFYGDALDYWGQGTTVTVSSGGGG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCNFYGDALDYWGQGTTVTVSSGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SGGGGSGGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Collegeville
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PΑ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application US/08983035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 E: Rhone-Poulenc Rorer Inc. 500 Arcola Road, Mailstop 3C43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    USA
                                                 Conservative
                                                                                                                                                                                                                                                           (610) 454-3816
                                                                                                                                               protein
                                                               99.1%;
98.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US/08/983,035
                                                                                                                                                                                                                                                                                            ST95044-US
                                                2;
                                                                Score 1277;
Pred. No. 3
                                                Mismatches
                                              ; DB 13;
3.6e-101;
hes 1;
                                                                               Length
                                                 Indels
                                                                                 535;
                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
```

```
밁
                                                                                                δÃ
                                                                                                                                  В
                                                                                                                                                               οy
                                                                                                                                                                                                      В
                                                                                                                                                                                                                                    γΩ
                                                                                                                                                                                                                                                                                                                                                        ; FEATURE:
OTHER INFORMATION: Description of Artificial Sequence:
OTHER INFORMATION: natural origin
US-09-419-788-113
В
                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-419-788-113
                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: Patentin Ver. SEQ ID NO 113
LENGTH: 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                         Matches 193;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 113, Application US/09419788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EARLIER APPLICATION NUMBER: 66/BOM/1998 INDIA EARLIER FILING DATE: 1998-10-16 NUMBER OF SEQ ID NOS: 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/419,788
CURRENT FILING DATE: 1999-10-18
EARLIER APPLICATION NUMBER: 98 11 9630.6
EARLIER FILING DATE: 1998-10-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: Molecular Pathogenicide Mediated Plant Disease
TITLE OF INVENTION: Resistance
FILE REFERENCE: 0.47-0189P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: SACK, Markus
APPLICANT: MONECKE, Michael
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: NAHRING, Jorg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: FISCHER, RAAPPLICANT: SCHILLBERG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: LIAO, Yu-Cai
                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 257
TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: ZIMMERMAN, Sabine
APPLICANT: EMANS, Neil
               174 QRPGQSPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLT
                                                             243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                  61 APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCNFYGDALDYWGQGTTVTVSSGGG- 119
||:|||:||| ||:||| ||:||| ||:||| ||:|||
63 NQKFKGKATLTADKSSSTAYMQLSSLTSEDSAVYYC----ARPDVWGAGTLLTVSAGAGP 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                      ω
                                                                                                                                                                                                                                      1 QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY
                                                                                                                                                                                                    KRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGTKL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ELK 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SGGGGSGGGSDVLMTQTFLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SGGGGSGGGGUVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APKFQGKATMSADTSSNTAYLQLSSLASEDTAVYYCNFYGDALDYWGQGTTVTVSSGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QVQLQESGAELVGSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY
QRPGQSPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKISRVEAEDLGVYYCWQGTHFPHT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGTKL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APKFOGKATMIADTSSNTAYLQLSSLASEDTAVYYCNFYGDALDYWGQGTTVTVSSGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SPIEGEL, Holger
                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rainer
                                                                                                                                                                                                                                                                                     75.38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Stefan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98 11 9630.6 EP
                                                                                                                                                                                                                                                                                       Score 970.5;
Pred. No. 2.8
                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                     1.8e-75;
nes 33;
                                                                                                                                                                                                                                                                                                       DB 18; Length
                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                         257;
                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                             no
                               233
                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 62
                                                                                                                                                                                                                                                                         ω
```

RESULT 4 US-09-297-181-4

239

FGGGTKLEIK 248

234 FGAGTKLEIK 243

2;

```
NUMBER OF SEQ ID NOS: 3
SOFTWARE: PatentIn Ver.
SEQ ID NO 28
LENGTH: 238
LENGTH: 238
TYPE: PRT
ORGANISM: Mouse
US-09-559-019-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                             Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; LENGTH: 249
; TYPE: PRT
; ORGANISM: Mus musculus
US-09-297-181-4
                                                                                                                                                                                                                                                                                                                US-09-559-019-28
                                                                                                                                                                                                                                                                                                                                        RESULT
                                                                                                                                       Sequence 28, Application US/09559019
GENERAL INFORMATION:
APPLICANT: Zhu, Zhenping
APPLICANT: Witte, Larry
TITLE OF INVENTION: Antibodies Specific to:
FILE REFERENCE: Sequence Listings 1-34 for
CURRENT APPLICATION NUMBER: US/09/559,019
CURRENT FILING DATE: 2000-04-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 4, Application US/09297181 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 187;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EARLIER APPLICATION NUMBER: PCT/FR97/01921
EARLIER FILING DATE: 1997-10-27
EARLIER APPLICATION NUMBER: FR96/13176
EARLIER FILING DATE: 1996-10-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/297,181
CURRENT FILING DATE: 1999-04-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Bracco, Laurent APPLICANT: Debussche, Laurent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQ ID NOS: 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: ANTI-P53 SINGLE-CHAIN ANTIBODY FRAGMENTS AND THEIR USES FILE REFERENCE: ST96030-US
                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDDENGDTEY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                             FGAGTKLEIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SSGGGGSGGGGSGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDS-DGKTYLNWLL 173
                                                                                                                                                                                                                                                                                                                                                                                                      FGGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QRPGQSPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLT 233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCN-----FYGDALDYWGQGTTVTV 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QKPGQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLP-T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SSGGGGSGGGGGGGGDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQ 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APNFQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                  Ver.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              74.68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     74.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 961; DB 16; Length 249; Pred. No. 1.7e-74; Mismatches 32; Indels
                                                                                                                                                                                        KDR and Uses Thereof 381-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         239
```

Query Match

72.28;

Score 930.5;

DB 19;

Length 238;

```
PCT-US00-19843-11 'Sequence 11, Application PC/TUS0019843; GENERAL INFORMATION:
                                                                                                                                  đ
                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                         ρ
                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                        Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; TYPE: PRT
; ORGANISM: Mouse
US-09-559-019-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-559-019-27
                                                                          RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
APPLICANT: Zhu, Zhenping
APPLICANT: Witte, Larry
TITLE OF INVENTION: Antibodies Specific to KDR and Uses Thereof
FILE REFERENCE: Sequence Listings 1-34 for 381-71
CURRENT APPLICATION NUMBER: US/09/559,019
CURRENT FILING DATE: 2000-04-25
NUMBER OF SEQ ID NOS: 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 71.9
Best Local Similarity 71.7
Matches 175; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: P
SEQ ID NO 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity 71.7 Matches 175; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 27,
APPLICANT: Herr, John
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY 60
                                                                                                                                                                                                             175
                                                                                                                                                                    240
                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                     120 GSGGGGSGGGSSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQS 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         235 LEIK 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                  235 LEIK 238
                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCN-FYGDALDYWGQGTTVTVSSGGG 119
                                                                                                                                                                                                                                                                                                                                                                                                        61 APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCN-FYGDALDYWGQGTTVTVSSGGG 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 QVQLQQSGAELVRSGASVKLSCTASGENIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                \vdash
                                                                                                                                                                  LEIK 243
                                                                                                                                                                                                             PKLWIYSTSNLASGVPARFSGSGSGTSYSLTISRMEAEDAATYYCQQRSSYPFTFGSGTK 234
                                                                                                                                                                                                                                                                                     GSGGGSGGGSSDIELTQSPAIMSASPGEKVTITCSASSSV-----SYMHWFQQKPGTS 174
                                                                                                                                                                                                                                                                                                                                                                   APKFQGKATMTADSSSNTAYLQLSSLTSEDTAVYYCNAYYGDYEGYWGQGTTVTVSSGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LEIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GSGGGGSGGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQS 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QVKLQQSGAELVGSGASVKLSCTTSGFNIKDFYMHWVKQRPEQGLEWIGWIDPENGDSDY 60
                                                                                                                                                                                                                                               PKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGTK 239
                                                                                                                                                                                                                                                                                                                                                                                                                                              QVKLQQSGAELVGSGASVKLSCTTSGFNIKDFYMHWVKQRPEQGLEWIGWIDPENGDSGY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PKLWIYSTSNLASGVPARFSGSGSGTSYSLTISRMEAEDAATYYCQQRSSYPFTFGSGTK 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGTK 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GSGGGGSGGGSDIELTQSPAIMSASPGEKVTITCSASSSV-----SYMHWFQQKPGTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APKFQGKATMTADSSSNTAYLQLSSLTSEDTAVYYCNAYYGDYEGYWGQGTTVTVSSGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PatentIi Ver.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/09559019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        71.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         71.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 926.5; DB Pred. No. 1.5e-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. 6.8e-72;
7; Mismatches 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120
```

2

```
PRIOR APPLICATION NUMBER: 60/145,512
PRIOR FILING DATE: 1999-07-23
NUMBER OF SEQ ID NOS: 18
SOFTWARE: PATENTIN Ver. 2.1
SEQ ID NO 11
LENGTH: 251
TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                           ; ORGANISM: Mus sp
US-09-523-095A-30
                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 8
US-09-523-095A-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                           SOFTWARE: Participation of the Second No. 30 LENGTH: 271
                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 30, Application US/09523095A GENERAL INFORMATION:
 Query Match
Best Local Similarity
Matches 174; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 172; Conserv
                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/09/523,095A CURRENT FILING DATE: 2000-03-10 PRIOR APPLICATION NUMBER: JP 11-63557 PRIOR FILING DATE: 1999-03-10
                                                                                                                                                                                                                                                                                                                                               APPLICANT: FUKUSHIMA, Naoshi
APPLICANT: UNO, Shinsuke
APPLICANT: OH-EDA, Masayoshi
                                                                                                                                                                                     NUMBER OF SEQ ID NOS: 4
SOFTWARE: Patentin Ver:
                                                                                                                                                                                                                                                                                                               APPLICANT: KIKUCHI, Yasufumi
TITLE OF INVENTION: APOPTOSIS-INDUCING SINGLE-CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: PCT/US00/19843
CURRENT FILING DATE: 2000-07-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Norton, Elizabeth J. APPLICANT: Deixman, Alan B. TITLE OF INVENTION: Recombinant TITLE OF INVENTION: Antigen FILE REFERENCE: 00415-02
                                                                                                                                                                                                                                                                                                  FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OTHER INFORMATION: Description of Artificial Sequence: synthetic OTHER INFORMATION: sequence substituting amino acids in the natural OTHER INFORMATION: mouse protein to "humanize" the protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          239 KLEIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           63 DVKFKNRVTITADTSTSTAYMQLSSLRSEDTAVYYCARGDYGCPFVYWGQGTTVTVSSGG 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYC--NFYGDALDYWGQGTTVTVSSGG 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLIFGAGT 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGSGGGGSGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQ 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KVEIK 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SPQLLIYRVSNRFSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCSQSTHVPFTFGQGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGSGGGGSGGGSDIVMTQSPSSLPVSVGDPASISCRSSQSLVHSNRDTYLHWYLQKPGQ 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        00415-02
                                                                                                                                                                                                                                                                                                  065678/0102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Recombinant Antibody Directed Against Human Sperm
                                                                                                                                                                                                      40
69.9%; Sc
70.7%; Pr
tive 29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        70.0%;
70.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30;
Score 900.5;
Pred. No. 3e-6
29; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 902; DB 1
Pred. No. 2e-69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                   5; DB 27;
3e-69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1; Length 251;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                    Length 271;
 <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2
 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ۲,
```

```
밁
                               Š
                                                                B
                                                                                                 δÃ
                                                                                                                                   멍
                                                                                                                                                                 ον.
Έ
                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                 ğ
                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-523-095A-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ΩV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-523-095A-26
                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: Parter
SEQ ID NO 26
LENGTH: 274
TYPE: PRT
ORGANISM: Mus :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATI
                                                                                                                                                                                                                                                                                                                                      Matches 174; Conservative
                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: UNO, Shinsuke
APPLICANT: OH-EDA, Masayoshi
APPLICANT: KIKUCHI, Yasufumi
TITLE OF INVENTION: APOPTOSIS-INDUCING SINGLE-CHAIN
FILE REFERENCE: 065678/0102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/09/523,095A
CURRENT FILING DATE: 2000-03-10
PRIOR APPLICATION NUMBER: JP 11-63557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE: 1
NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                238 TKLEIK 243
                                                                 201 QSPKLLIYKVSNRFSGVPDRFSGSGSGTDFTLKISRVEAEDLGVYFCSQSTHVPYTSGGG
                                                                                                  178
                                                                                                                                  141 GGGSGGGSGGGSDVVMTQTPLSLPVSLGDQASISCRSSQSLLHSKGNTYLQWYLQWPG 200
                                                                                                                                                                    118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   238 TKLEIK 243.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              118
261 TKLEIK 266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            258 TKLEIK 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            198 QSPKLLIYKVSNRFSGVPDRFSGSGSGTDFTLKISRVEAEDLGVYFCSQSTHVPYTSGGG
                                                                                                                                                                                                  23
                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               80 NEKFKGKATLTSEKSSSAAYMELSSLASEDSAVYYCARGGYY--SYDDWGQGTTLTVSSG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20
                                                                                                                                                                                                                                                                                   1 QVQLQQSGAEL,VRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY 60
                                                                                          QSPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAG 237
                                                                                                                                                                                                                                                                    QVQLQQSGPDLVKPGASVKMSCKASGYTFVNHVMHWVKQKPGQGLEWIGYIYPYNDGTKY 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QSPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYYCWQGTHSPLTFGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGGSGGGGSGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYC---NFYGDALDYWGQGTTVTVSSG
                                                                                                                                                               GGGSGGGGSGCGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPG 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGGSGGGGGGGSDVVMTQTPLSLPVSLGDQASISCRSSQSLLHSKGNTYLQWYLQKPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QVQLQQSGPDLVKPGASVKMSCKASGYTFVNHVMHWVKQKPGQGLEWIGYIYPYNDGTKY 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Partentin Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FUKUSHIMA, Naoshi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Application US/09523095A
                                                                                                                                                                                                                                                                                                                                                                                                                                   ďs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1999-03-10
                                                                                                                                                                                                                                                                                                                                                    69.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       40
                                                                                                                                                                                                                                                                                                                                      29; Mismatches
                                                                                                                                                                                                                                                                                                                                                     Score 900.5; DE Pred. No. 3e-69;
                                                                                                                                                                                                                                                                                                                                                                     DB 27; Length 274;
                                                                                                                                                                                                                                                                                                                                    38;
                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                      <u>ن</u>
                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             197
                                                                                                                                                                                                                                                                                                                                      2
```

; Sequence 16, Application US/09364088

RESULT 10 US-09-364-088-16

GENERAL INFORMATION:

APPLICANT: Yashwant M. Deo, et al.

TITLE OF INVENTION: THERAPEUTIC COMPOUNDS COMPRISED TITLE OF INVENTION: OF ANTI-FC RECEPTOR ANTIBODIES NUMBER OF SEQUENCES: 16
CORRESPONDENCE ADDRESS:

ADDRESSEE:

TITLE OF INVENTION:

BINDING AGENTS

```
20
                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                   QΥ
                                                                                                                                                                                                                                                                                                                              멍
                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                              us-09-523-279-16
                                                                                                     RESULT
                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; MOLECULE TYPE: protein US-09-364-088-16
Sequence 16, Application US/09523279
GENERAL INFORMATION:
APPLICANT: Yashwant M. Deo et al.
TITLE OF INVENTION: THERAPEUTIC COMPOUNDS COMPRISES OF ANTI-FC RECEPTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches 171;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 553 amino acid
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Remillard, Jane E.
REGISTRATION NUMBER: 38,872
REFERENCE/DOCKET NUMBER: MXI-043CP2
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US 0 FILING DATE: 07-JUNE-1995 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDLIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0:
FILING DATE: 07-JUNE-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
                                                                                                                                                                 509
                                                                                                                                                                                                                                               449 KPGTSPKLWIYSTSNLASGVPARFSGSGSGTSYSLTISRMEAEDAATYYCQQRSSYPLTF
                                                                                                                                                                                                                                                                                                                                                                  115 SSGGGGSGGGGGGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQ 174
                                                                                                                                                                                                                                                                                                                                                                                                            338 PKFQGKATFTTDTSSNTAYLQLSSLTSEDTAYYYCNEGTPTGPYY---FDYWGQGTTVTV 394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           278 IKLQQSGAELVRSGTSVKLSCTASGFNIKDSYMHWLRQGPEQGLEWIGWIDPENGDTEYA 337
                                                                                                                                                                                                     235 GAGTKLEIK 243
                                                                                                                                                                                                                                                                                     175 RPGQSPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTF 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                  62 PKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCN-----FYGDALDYWGQGTTVTV 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STATE: Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGTKLELK 517
                                                                                                                                                                                                                                                                                                                           SSGGGGSGGGGGGENVLTQSPAIMSASPGEKVTITCSASSSV-----SYMHWFQQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Boston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       E: LAHIVE & COCKFIELD, LLP 28 State Street, 24th Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         553 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (617)742-7414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (617)227-7400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            69.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US/09/364,088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      08/484,172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 900; DB 17;
Pred. No. 7.7e-69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels 16; Gaps
                                                                                                                                                                                                                                                                                                                           448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ώ
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Mus musculus US-09-523-279-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-188-082-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: Pat
SEQ ID NO 16
LENGTH: 553
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 16, Applications GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches 171; · Conservative ·
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER:
PRIOR FILING DATE: 1996-C
PRIOR APPLICATION NUMBER:
PRIOR FILING DATE: 1995-C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/523,279
CURRENT FILING DATE: 2000-03-10
PRIOR APPLICATION NUMBER: 09/364,088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR FILING DATE: 1999-(
PRIOR APPLICATION NUMBER: PRIOR FILING DATE: 1998-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILE REFERENCE:
                                                COUNTRY: USA;
ZIP: 02109-1375
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC COMPATINE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           115
                                                                                                                                                                                                 STREET: 60 St
CITY: Boston,
STATE: Massac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              235 GAGTKLEIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 449 KPGTSPKLWIYSTSNLASGVPARFSGSGSGTSYSLTISRMEAEDAATYYCQQRSSYPLTF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       175 RPGQSPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTF 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              338 PKFQGKATFTTDTSSNTAYLQLSSLTSEDTAVYYCNEGTPTGPYY---FDYWGQGTTVTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    278 IKLÓOSGAELVRSGTSVKLSCTASGFNIKDSYMHWLROGPEOGLEWIGWIDPENGDTEYA
                *APPLICATION NUMBER: US/09/188,082 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 62 PKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCN-----FYGDALDYWGQGTTVTV 114
                                                                                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 VQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEYA 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SSGGGGSGGGGSGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQ 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGTKLELK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SSGGGGSGGGGGGSENVLTQSPAIMSASPGEKVTITCSASSSV-----SYMHWFQQ
                                                                                                                                                                                               Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                    Application US/09188082
                                                                                                                                                                                                                                 60 State Street, Suite 510
                                                                                                                                                                                                                                                                                                                                                             Joel Goldstein
Robert Graziano
                                                                                                                                                                                                                                                                                                                         Chezian Somasundaram
VENTION: THERAPEUTIC COMPOUNDS COMPRISED
                                                                                                                                                                                                                                                                                                                                                                                                Yashwant M. Deo
                                                                                                                                                                                                                                                       LAHIVE & COCKFIELD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MXI-043CP3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1996-07-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1995-07-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-11-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1999-07-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          69.8%;
                                                                                                                                                                                                                                                                                                          OF ANTI-FC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  08/661,052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   09/188,082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08/484,172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 900; DB 19;
Pred. No. 7.7e-69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                        RECEPTOR ANTIBODIES
                                                                       #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 553;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           448
```

ω

```
밁
                               δÃ
                                                                                                                                                     ; TYPE: PRT; ORGANISM: Mus sp. US-09-523-095A-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; MOLECULE TYPE: protein US-09-188-082-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-523-095A-40
                                                        Query Match
Best Local Similarity
Matches 173; Conserv
                                                                                                                                                                                                      SEQ ID NO 40
LENGTH: 245
                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 40, Application US/09523095A GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local :
                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/523,095A
CURRENT FILING DATE: 2000-03-10
PRIOR APPLICATION NUMBER: JP 11-63557
                                                                                                                                                                                                                                       NUMBER OF SEQ ID NOS:
SOFTWARE: Patentin V
                                                                                                                                                                                                                                                                         PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: (617)227-5941
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                             ILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                    PLICANT: KIKUCHI, YASUfumi
ITLE OF INVENTION: APOPTOSIS-INDUCING SINGLE-CHAIN
ILE REFERENCE: 065678/0102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REGISTRATION NUMBER: 35,430
REFERENCE/DOCKET NUMBER: MX
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION: NAME: Arnold, Beth E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              235 GAGTKLEIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  115 SSGGGSGGGGSGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQ 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              509 GAGTKLELK 517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 338 PKFQGKATFTTDTSSNTAYLQLSSLTSEDTAVYYCNEGTPTGPYY---FDYWGQGTTVTV 394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  278 IKLQQSGAELVRSGTSVKLSCTASGFNIKDSYMHWLRQGPEQGLEWIGWIDPENGDTEYA 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     62 PKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCN-----FYGDALDYWGQGTTVTV 114
Match 69.8%;
Local Similarity 68.7%;
les 171; Conservative 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: amino acid TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 VQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEYA 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RPGQSPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTF 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KPGTSPKLWIYSTSNLASGVPARFSGSGSGTSYSLTISRMEAEDAATYYCQQRSSYPLTF 508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SSGGGGSGGGGGGGSENVLTQSPAIMSASPGEKVTITCSASSSV-----SYMHWFQQ 448
                                                                                                                                                                                                                                                                                                                                                                                           OH-EDA, Masayoshi
                                                                                                                                                                                                                                                                                                                                                                                                                          FUKUSHIMA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       553 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (617)227-5941
                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (617)227-7400
                                                                                                                                                                                                                                                                                                                                                                                                           Shinsuke
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Beth E.
                                                                                                                                                                                                                                         Ver.
                                                                                                                                                                                                                                                                       1999-03-10
                                                                                  69.2%;
70.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                         Naoshi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            08/661,052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27;
                                                                Score 892.5; DB 2/;
Pred. No. 1.3e-68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 900; DB 27;
Pred. No. 7.7e-69;
7; Mismatches 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MXI-043CP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 553;
                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   16; daps
                                                                  5
                                                                  2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       w
••
```

```
Q
                                                                                                                              당
                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                               RESULT 15
US-09-523-095A-32
                                                                                                                                                                                           B
                                                                                                                                                                                                                                                            Вþ
                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; ORGANISM: Mus sp. US-09-523-095A-34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: Par
SEQ ID NO 34
LENGTH: 271
TYPE: PRT
                               Sequence 32, Application US/09523095A GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 173; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION
 -APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 34, Application US/09523095A
              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: PRIOR FILING DATE: 1999-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/09/523,095A CURRENT FILING DATE: 2000-03-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: KIKUCHI, Yasufumi
TITLE OF INVENTION: APOPTOSI
                                                                                                                         258 TKLEIK 263
                                                                                                                                                                                           198
                                                                                                                                                                                                                            178
                                                                                                                                                                                                                                                            138
                                                                                                                                                                                                                                                                                          118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240 TKLEIK 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    238 TKLEIK 243
                                                                                                                                                                                                                                                                                                                        80 NEKFKDKATLTSDKSSTTAYMDLSSLASEDSAVYYCARGGYY--TYDDWGQGTTLTVSSG
                                                                                                                                                                                                                                                                                                                                                  61 APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYC---NFYGDALDYWGQGTTVTVSSG 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              51
                                                                                                                                                                                                                                                                                                                                                                                       20
                                                                                                                                                                                                                                                                                                                                                                                                         1 QVQLQQSGAELVRSGASVKLSCTASGENIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY 60
                                                                                                                                                       TKLEIK 243
                                                                                                                                                                                                               QSPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAG
                                                                                                                                                                                           OSPKLLIYKVSNRFSGVPDRFSGSGSVTDFTLMISRVEAEDLGVYFCSOSTHVPYTFGGG
                                                                                                                                                                                                                                                          GGGSGGGGSGGGSDVVMTQSPLSLPVSLGDQASISCRSSQSLVHSNGKTYLHWYLQKPG
                                                                                                                                                                                                                                                                                        GGGSGGGGGGGGDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPG
                                                                                                                                                                                                                                                                                                                                                                                     QVQLQQSGPELVKPGASVKMSCKASGYTFANHVIHWVKQKPGQGLEWIGYIYPYNDGTKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QSPKLLIYKVSNRFSGVPDRFSGSGSVTDFTLMISRVEAEDLGVYFCSQSTHVPYTFGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QSPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NEKFKDKATLTSDKSSTTAYMDLSSLASEDSAVYYCARGGYY--TYDDWGQGTTLTVSSG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APKFQGKATMEADTSSNTAYLQLSSLASEDTAVYYC --- NFYGDALDYWGQGTTVTVSSG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGGSGGGSGGGSDVVMTQSPLSLPVSLGDQASISCRSSQSLVHSNGKTYLHWYLQKPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGGSGGGGSGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Patentin Ver.
TUKUSHIMA, Naoshi
UNO, Shinsuke
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OH-EDA, Masayoshi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ONO,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FUKUSHIMA, . Naoshi
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ON: APOPTOSIS-INDUCING SINGLE-CHAIN 065678/0102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Shinsuke
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1999-03-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000-03-10
BER: JP 11-63557
                                                                                                                                                                                                                                                                                                                                                                                                                                                    69.2%; Score 892.5;
70.3%; Pred. No. 1.46
Live 29; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1.4e-68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              F۷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                      5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                         137
                                                                                                                                                                                                                                                                                                                                                                                        79
                                                                                                                                                                                                                                                            197
                                                                                                                                                                                                                                                                                          177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                119
                                                                                                                                                                                              257
                                                                                                                                                                                                                              237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  179
```

2

APPLICANT:

OH-ED&, Masayoshi

```
CURRENT APPLICATION NUMBER: US/09/523,095A
CURRENT FILING DATE: 2000-03-10
PRIOR APPLICATION NUMBER: UP 11-63557
PRIOR FILING DATE: 1999-03-10
NUMBER OF SEQ ID NOS: 40
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 32
LENGTH: 274
TYPE: PAT
ORGANISM: Mus sp.
US-09-523-095A-32
                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                  망
                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                              B
Search completed: February 12, 2001, 15:26:21 Job time: 211 sec
                                                                                       밁
                                                                                                                        Ş
                                                                                                                                                            밁
                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 70.3
Matches 173; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: KIKUCHI, YASUfumi
TITLE OF INVENTION: APOPTOSIS-INDUCING SINGLE-CHAIN FV
FILE REFERENCE: 065678/0102
                                                                                                          238 TKLEIK 243
                                                                                                                                                                                                                               261 TKLEIK 266
                                                                                                                                                                              178 QSPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAG 237
                                                                                                                                                            201 QSPKLLIYKVSNRFSGVPDRFSGSGSVTDFTLMISRVEAEDLGVYFCSQSTHVPYTFGGG 260
                                                                                                                                                                                                                                                                                                                      61 APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYC---NFYGDALDYWGQGTTVTVSSG 117
                                                                                                                                                                                                                                                                                                                                                                          83 NEKFKDKATLTSDKSSTTAYMDLSSLASEDSAVYYCARGGYY--TYDDWGQGTTLTVSSG 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                 69.2%; Score 892.5; DB 27; Length 274; 70.3%; Pred. No. 1.5e-68; tive 29; Mismatches 39; Indels 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ហ
``
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                   2;
```

# THIS PAGE BLANK (USPTO)

Run

```
Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Title:
Perfect score:
                                                                                                                                                                                                                                                                                                          Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                           Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Searched:
                                                                                                                                                                                                                                                                                                 ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     on:
  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
 900
843.5
828.5
828.5
828.5
812
812
812
812
804
804
804.5
795.5
795.5
7795.5
7795.5
7795.5
7795.5
7795.5
7795.5
7795.5
7795.5
                                                                                                                                                                                                                                                                                                Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    seq
                                                                                                                                                                                                                                                                                                                                                                                       Issued_Patents_AA:*
1: /cgn2_6/ptodata/2
2: /cgn2_6/ptodata/2
3: /cgn2_6/ptodata/2
4: /cgn2_6/ptodata/2
5: /cgn2_6/ptodata/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                Match Length
 BLOSUM62
Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-297-181-2
1289
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      174772 seqs, 17957048 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     February 12, 2001, 15:22:46; Search time 21.01 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QVQLQQSGAELVRSGASVKL.....CWQGTHSPLTFGAGTKLEIK 243
                                                                                                                                                                                                                                                                                                                                                                                      /cgn2_6/ptodata/2/iaa/5A_COMB.pep:*
/cgn2_6/ptodata/2/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/2/iaa/s_COMB.pep:*
/cgn2_6/ptodata/2/iaa/pcTUS_COMB.pep:*
/cgn2_6/ptodata/2/iaa/backfiles1.pep:*
 DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gapext 0.5
                US-08-331-398A-34
US-08-75-811-53
US-08-875-811-53
US-08-875-811-53
US-08-875-813-3
US-08-875-814-3
US-08-463-13-3
US-08-463-13-3
US-08-447-402-1
US-08-447-402-1
US-08-453-3404-4
US-08-453-3404-4
US-08-453-3404-4
US-08-533-497A-20
US-08-553-497A-20
US-08-553-497A-20
US-08-553-497A-20
US-08-553-497A-20
US-08-553-497A-20
US-08-553-497A-20
US-08-553-497A-20
                                                                                                                                                                                                                                                                                                                              SUMMARIES
  -488-113B-148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (without alignments)
207.690 Million cell updates/sec
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                             Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                  Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                    Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                               Description
                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                     we 8, Appli
we 11, Appl
me 3, Appl
                   3, Appli
6, Appli
7, Appli
4, Appli
4, Appli
4, Appli
4, Appli
5, Appli
5, Appli
5, Appli
8, Appli
                                                                                                                                                                                                    2, Appli
16, Appl
63, Appl
34, Appl
34, Appl
34, Appl
53, Appl
         Q
                             Ď,
                                                                                                                                                        TELEFAX: 703-816-4100
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 270 amino acid
                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/652,507
FILING DATE: 02-Jul-1996
CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                    TELECOMMUNICATION INFORMATION: TELEPHONE: 703-816 40000
```

US-08-652-507- Sequence 2, Sequence 2, Patent No. 5 GENERAL INF APPLICANT TITLE OF NUMBER OF CORRESPON ADDRESS STREET: CITY: STATE: COUNTRY ZIP: ZIP: ZIP: COMPUTER MEDIUM COM	22 20 20 20 20 20 20 20 20 20 20 20 20
-08-652-507-2 Sequence 2, Application US/G Patent No. 5876691 GENERAL INFORMATION: APPLICANT: TITLE OF INVENTION: ANTI TITLE OF INVENTION: NUMBER OF SEQUENCES: ADDRESSEE: Nixon & Van STREET: 1100, No. 58766 CITY: Arlington STATE: Virginia COUNTRY: USA ZIP: 22201-4714 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy did COMPUTER: BN PC compe OPERATING SYSTEM: PC-I SOFTWARE: PATENTIN RC-I	752.5 752.5 752.5 752.5 742.5 744.5 740.7 740.7 731.5 731.5 731.5 731.5 731.5 731.5
2, Application U 2, Application U 5, 5876691 INFORMATION: ANT: OF INVENTION: OF INVENTION: OF INVENTION: OF INVENTION: OF INVENTION: A OF INVENTION: A OF INVENTION: A OF INVENTION: A OF INVENTION OF I	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
N:  N:  ON:  ANTIBODY  CON:  COS:  SUDDRESS:  XOO & Vanderhy  NO. 5876691th  iia  E FORM:  Floppy disk Floppy disk Floppy disk PC-DOS/MS  ENTIR Release  TON NATA:	2440 2440 2400 2400 2410 2411 2411 2411
US/08652507  ANTIBODY AGAINST CARCINOEMBRYONIC  8 8 8 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9	US-08-477-484B-148 US-08-646-360-148 US-08-839-765-148 US-09-136-389-148 US-08-25-838-16 US-08-25-838-11 US-08-25-838-11 US-08-25-838-11 US-08-25-838-11 US-08-25-838-11 US-08-25-90-2 US-09-166-750-19 US-09-166-750-19 US-09-172-019-19 US-09-186-094-19 US-09-186-094-19 US-09-18894-922A-14 US-08-894-922A-10
C ANTIGEN	Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence
	148, App 148, App 148, App 148, App 16, App 16, App 11, App 11

```
TOPOLOGY: linear

MOLECULE TYPE: protein
US-08-652-507-2
                                                                                                       Matches 173;
                                                                                                                     Query Match
Best Local Similarity
61 APKFQGKATMTADTSSNIAYLQLSSLASEDTAVYYCN-----FYGDALDYWGQGTTVT
                                             27 QVKLQQSGAELVRSGTSVKLSCTASGFNIKDSYMHWLRQGPEQGLEWIGWIDPENGDTEY
                                                                         μ
                                                              QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY
                                                                                                       Conservative
                                                                                                                     70.3%;
                                                                                                      ; Score 906; DB 2;
; Pred. No. 6.8e-66;
26; Mismatches 35
                                                                                                         35;
                                                                                                                                  Length 270;
                                                                                                       Indels
                                                                                                       16;
                                                                                                      Gaps
                                             86
                                                                           60
```

ω

TELEPHONE: 703-01-TELEPHONE: 703-816-4100

TYPE: amino acids

NAME: Arthur R. Crawford REGISTRATION NUMBER: 25,327 REFERENCE/DOCKET NUMBER: 11

117-211

망 δõ 밁 δÃ В

> 144 114

87

174 QRPGQSFKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLT 233

QKPGTSPKLWIYSTSNLASGVPARFSGSGSGTSYSLTISRMEAEDAATYYCQQRSSYPLT

257

VSSGGGGSGGGGSENVLTQSPAIMSASPGEKVTITCSASSSV-----SYMHWFQ 197

VSSGGGGSGGGGGGGGDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLL 173 APKFQGKATFTTDTSSNTAYLQLSSLTSEDTAVYYCNEGTPTGPYY---FDYWGQGTTVT

143

밁 S

FGAGTKLELK 267 FGAGTKLEIK 243

234 198

```
δÃ
밁
                                                               В
                                                                                             Š
                                                                                                                                                                                                                ; MOLECULE TYPE: protein US-08-661-052-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 2
US-08-661-052-16
                                                                                                                               Matches
                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 16,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                 TELEFAX: (617)227-5941 (NFORMATION FOR SEQ ID NO: 16:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tent No.
                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
LENGTH: 553 amino acid
                                                                                                                                                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER: MX TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDIUM TYPE: Floppy disk
COMPUTER: IRM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 07-JUNE-199
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
338 PKFQGKATFTTDTSSNTAYLQLSSLTSEDTAVYYCNEGTPTGPYY---FDYWGQGTTVTV 394
                                                               278 IKLQQSGAELVRSGTSVKLSCTASGFNIKDSYMHWLRQGPEQGLEWIGWIDPENGDTEYA 337
                 S2 PKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCN-----FYGDALDYWGQGTTVTV 114
                                                                                                                                                                                                                                                   TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET:
                                                                                                                                                                                                                                                                                                                                                                                                     REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Arnold, Beth E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                 TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE:
                                                                                  171;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     b, Application US/08661052
5837243
                                                                                                                                                                                                                                                               amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     02109-1875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Massachusetts
                                                                                                                                                                                                                                                                                553 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60 State Street,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chezian Somasundaram
NVENTION: THERAPEUTIC COMPOUNDS COMPRISED
NVENTION: OF ANTI-FC RECEPTOR ANTIBODIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Robert Graziano
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Joel Goldstein
                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Yashwant M. Deo
                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LAHIVE & COCKFIELD
                                                                                                                                                                                                                                                                                                                                                   (617)227-7400
                                                                                                                                                . 69.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   us/08/661,052
                                                                                                                               27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   08/484,172
                                                                                                                                                                                                                                                                                                                                                                                    MXI-043CP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Suite 510
                                                                                                                             Score 900; DB 2; 1
Pred. No. 4.8e-65;
7; Mismatches 35;
                                                                                                                                                              Length 553;
                                                                                                                               Indels
                                                                                                                                 16;
                                                                                                                               Gaps
                                                                                                                               ω
··
```

```
밁
                           Š
                                                                                                                                    US-09-184-658-63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 3
US-09-184-658-63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q
                                                            Best Local Similarity Matches 167; Conserv
                                                                           Query Match
Best Local s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS: 69
SOFTWARE: PatentIn Ver. 2
SEQ ID NO 63
LENGTH: 289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/09/184,658
CURRENT FILING DATE: 1998-11-02
EARLIER APPLICATION NUMBER: 60/065,423
EARLIER FILING DATE: 1997-11-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Mezes, Peter S. APPLICANT: Downs, James T. APPLICANT: Johnson, Kimber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILE REFERENCE: PC9946-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Otterness, Ivan G.
                                                                                                                                                      NAME/KEY: SITE LOCATION: (284)..(; OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: SIGNAL LOCATION: (1)..(22)
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IIILE OF INVENTION: Assays for Measurement of Protein Fragments in
IIILE OF INVENTION: Biological Media
                                                                                                                                                                                                       OTHER INFORMATION:
FEATURE:
                                                                                                                                                                                                                                                                                                                                                NAME/KEY: DOMAIN
LOCATION: (139)..(154)
OTHER INFORMATION: 16
                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: DOMAIN
LOCATION: (23)...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                    NAME/KEY: SITE
                                                                                                                                                                                                                                                                                     OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                                                   OCATION:
                                                                                                                                                                                                                                                                                                   NAME/KEY: DOMAIN COCATION: (155).
                                                                                                                                                                                                                                                                                                                                                                                                  PEATURE
                                                                                                                                                                                                                                                                                                                                                                                                              THER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        509 GAGTKLELK 517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                175 RPGQSPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   449 KPGTSPKLWIYSTSNLASGVPARFSGSGSGTSYSLTISRMEAEDAATTYCQQRSSYPLTF
23 EVQLVESGGGSVQPGGSLKLSCAASGFTFNTYGMSWVRQTPDKRLEWVATINSNGGLTFY 82
              1 QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               63, 60307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGTKLEIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SSGGGGSGGGGSENVLTQSPAIMSASPGEKVTITCSASSSV-----SYMHWFQQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SSGGGGSGGGGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQ
                                                                                                                                                                                                                                                                                                                                                                                                               (23)..(138)
DRMATION: 5109
                                                                                                                                                                                                                                       (270) \cdot \cdot (279)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Application US/09184658
                                                              Conservative
                                                                                                                                                                                                                                                                                   )..(266)
ION: 5109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (22)
                                                                                                                                                          (289)
N: His
                                                                                                                                                                                                                     myc tag
                                                                                                                                                                                                                                                                                                                                                   16 amino acid linker
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Description of Artificial Sequence: \operatorname{scFv}.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            pCANTAB6 signal peptide;
likely initiator Met.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kimberly S.
                                                                             65.48;
                                                                                                                                                        tag
                                                                                                                                                                                                                                                                                     VL domain.
                                                                                                                                                                                                                                                                                                                                                                                                                 ЧΛ
                                                                                                                                                                                                                                                                                                                                                                                                               domain
                                                              23;
                                                                             Score 843.5; DB 3; Pred. No. 7.9e-61;
                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Val
                                                              53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            라
                                                                                           Length
                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            position 1 is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5109 VH -
                                                                                             289;
                                                              1;
                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            most
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 448
```

:

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δδ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-331-398A-34
                                                                                            US-08-331-398A-34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Patent No.
                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 34,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                               TELEFAX: (415) 543-5043
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                            APPLICATION DATE: 30-52.
PRIOR APPLICATION NUMBER: US 07/596,289
APPLICATION NUMBER: 12-0CT-1990
                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/767,331
FILING DATE: 30-SEP-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                           REGISTRATION NUMBER: 38,498
REFERENCE/DOCKET NUMBER: 015280-126110US
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 543-9600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: Single Chain B3 Antibody Fusion Proteins TITLE OF INVENTION: and Their Uses (as amended)
                                                                                                        MOLECULE TYPE:
                                                                                                                                                                                                                                                                       FILING DATE: 12-OCT-1990
ATTORNEY/AGENT INFORMATION:
NAME: Hunter, Tom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   263 LELK 266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET:
                                                                                                                                                    LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                        TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCNFYGDALDYWGQGTTVTVSSGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PKRLIFLVSELDSGVPDRFTGSGSGTDFTLKISRAEAEDLGVYYCCQGTHFPHTFGAGTK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SGGGGSGGG-SDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQS 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LEIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGTK 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADSVKGRFTISRDNAKNTLYLQMNRLKSGDSGMYYCVRGYSNYARWGQGALVTVSSGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SGGGGSGGGSSDVVMTQTPLTLSVTIGQSASISCKSSQSLLGSDGLTYLIWLLQRPGQS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                94105-1492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <sup>4</sup>, Application US/08331398A
5608039
                                                                                                                                   amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        E: Townsend and Townsend and Crew
One Market Plaza, Steuart Street Plaza
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Willingham, Mark
FitzGerald, David
                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Brinkmann, Ulrich
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pastan, Ira
                                                                                                                                                                                                                                                                                                                                                                                                         28-OCT-1994
                                                                                                        protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tee
                               64.3%; Score 828.5; 63.7%; Pred. No. 1.1
                                                                                                                                                                                                                                                                                                                                                                                                                         US/08/331,398A
                                                                                                                                                                                  34:
                 34;
                 Mismatches
                               .1e-59;
                                           DB 1;
                                           Length
                 Indels
                                             248;
               ω,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
Query Match 64.3
Best Local Similarity 63.7
Matches 156; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2
```

```
US-08-331-397B-34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 34, Application US/08331397B Patent No. 5981726
                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: !Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Ver:
CURRENT APPLICATION DATA:
'APPLICATION DATA:
'APPLICATION WIMBER: US/08/331,397B
FILING DATE: '28-OCT-1994
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                      TELEFAX: (415) 543-50 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/596,289
FILING DATE: '12-0CT-1990
TOPOLOGY: linear MOLECULE TYPE: protein
                                                                        SEQUENCE CHARACTERISTICS:
LENGTH: 248 amino acid
                                                                                                                                                                                                                                                                                 FILING DATE: 12-OCT-1990 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/767,331
FILING DATE: '30-SEP-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                          TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       243 KLEIK 247 ·
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   239 KLEIK 243
                                                                                                                                                                  TELEPHONE:
                                                                                                                                                                                                                              NAME: Hunter, Tom
REGISTRATION NUMBER: 38,498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ZIP: 94105-1492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      63 DTVKGRFTISRDNARNTLYLQMSRLKSEDTAIYSCARGLAWGAWFAYWGQGTLVTVSSGG 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             62 PKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCN---FYGDALDYWGQGTTVTVSSGG 118
                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGT 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGSGGGGSGGGSDVLMTQSPLSLPVSLGDQASISCRSSQIIVHSNGNTYLEWYLQKPGQ 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGSGGGGSGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQ 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VKLVESGGGLVQPGGSLKLSCATSGFTFSDYYMYWVRQTPEKRLEWVAYISNDDSSAAYS 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEYA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SPKLLIYKVSNRFSGVPDRFSGSGSGTDFTLKISRVEAEDLGVYYCFQGSHVPFTFGSGT
                                                amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       One Market Plaza,
                                                                      248 amino acids
                                                                                                                                              (415)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Benhar, Itai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pastan, Ira
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Townsend
                                                                                                                                                                    (415) 543-9600
                                                                                                                                          543-5043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chimeric and Mutationally Stabilized Tumor-Specific Antibody Fragments, Fusion Proteins, Thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and Townsend and Crew
                                                                                                                                                                                                                015280-126120US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Steuart Street Plaza
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and Uses
```

64.3%; 63.7%;

34;

Score 828.5; Pred. No. 1.1e 34; Mismatches

1.1e-59; ches 52; DB 2;

Length 248; Indels

**ω** 

Gaps

1;

당

Ş

Š

Вb ş В

밁 δÃ

<u>ب</u>

```
US-08-759-804A-34
                                                                                                                                                                                                                                                                                                             CLASSIFICATION: 536

PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/331,398

FILING DATE: 28-OCT 1994

PRIOR APPLICATION NUMBER: US 07/767,331

FILING DATE: 30-SEP-1991

PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/596,289

APPLICATION NUMBER: US 07/596,289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                              NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/759,804A
FILING DATE: 03-DEC-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compati
                                                                                    SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                            APPLICATION NUMBER: US 07/596,289
FILING DATE: 12-0CT-1990
ATTORNEY/AGENT INFORMATION:
NAMF: "CONTY TO THE T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Pai, Lee
TITLE OF INVENTION: Fusion Proteins, and
                                                                                                                               NAME: Weber, Ellen L.
REGISTRATION NUMBER: 32,762
REFERENCE/DOCKET NUMBER: 015280-126140US
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 576-0200
TELEFAX: (415) 576-0300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Pastan, Ira
APPLICANT: Willingham, Mark
APPLICANT: FitzGerald, David
TOPOLOGY: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          119
                                                               LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  63 DTVKGRFTISRDNARNTLYLQMSRLKSEDTAIYSCARGLAWGAWFAYWGQGTLVTVSSGG 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KLEIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGT 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGSGGGSGGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQ 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCN---FYGDALDYWGQGTTVTVSSGG 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SPKLLIYKVSNRFSGVPDRFSGSGSGTDFTLKISRVEAEDLGVYYCFQGSHVPFTFGSGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGSGGGGSGGGSDVLMTQSPLSLPVSLGDQASISCRSSQIIVHSNGNTYLEWYLQKPGQ 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VKLVESGGGLVQPGGSLKLSCATSGFTFSDYYMYWVRQTPEKRLEWVAYISNDDSSAAYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEYA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                34,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         94111-3834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               59902
                                        amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application US/08759804A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  E: Townsend and Townsend and Crew LLF 
Two Embarcadero Center, Eighth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Brinkmann, Ulrich
                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tumor-Specific Antibody Fragments, Fusion Proteins, and Uses Thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 David
                                                                                                                 34:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Д.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                        TELEFAX: (415) 576-030
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 365 amino acid
```

REFERENCE/DOCKET NUMBER: 01
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 576-0200

576-0300

amino acid

365 amino acids

REGISTRATION NUMBER: NAME: Faris, Susan K.

41,739

015280-244100US

```
US-08-875-811-53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-759-804A-34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Sim
Matches 156;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Patent No.
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION UMBER: WO PCT/US97/02588
FILING DATE: 19-FEB-1997
PRIOR APPLICATION DATA:
APPLICATION DATA: US 60/011,800
FILING DATE: 21-FEB-1996
ATTORNEY/AGENT INFORMATION:
NAME: ESTIS SUSSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                 SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                         MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend
                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         119
                                                                                                                                                                                                                                   MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            243 KLEIK 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  239 KLEIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     123 GGSGGGGSGGGSDVLMTQSPLSLPVSLGDQASISCRSSQIIVHSNGNTYLEWYLQKPGQ
                                                                                                                                                            APPLICATION NUMBER: US/OFFILING DATE: 19-FEB-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           63 DTVKGRFTISHDNARNTLYLOMSRLKSEDTAIYSCARGLAWGAWFAYWGQGTLVTVSSGG 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     62 PKFQGKATMTKDTSSNTAYLQLSSLASEDTAYYYCN---FYGDALDYWGQGTTYTYSSGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 VQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEYA 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a 53, Ar.
Ma. 6045793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SPKLLIYKVSHRFSGVPDRFSGSGSGTDFTLKISRVEAEDLGVYYCFQGSHVPFTFGSGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGT 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGSGGGSGGGGSDYLMTQTPLTLSYTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQ 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      94111-3634
                                                                                                                                                                                                                                                                                                                                                                              San Francisco
                                                                                                                                                                                                                                                                                                                                                          California
                                                                                                                                                                                                                                                                                                                                                                                            E: Townsend and Townsend and Crew LLP Two Embarcadero Center, Eighth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Application US/08875811
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Wlodawer, Alexander
WENTION: Recombinant Ribonuclease Proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rybak, Susanna M.
Newton, Dianne L.
Boque, Lluis
                                                                                                                                                                                                                                                                                                                                        USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      64.3%; Score 828.5; DB 2 63.7%; Pred. No. 1.1e-59;
                                                                                                                                                                                   US/08/875,811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 248;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ω
``
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     182
```

0

0;

```
US-08-875-811-55; Sequence 55, A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; MOLECULE TYPE: protein US-08-875-811-53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 63.0%;
Best Local Similarity 61.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 150;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
              TELEFAX: (415) 576-0300
INFORMATION FOR SEQ ID NO: 55:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tent No.
                                                                                                                                                                                          PRIOR APPLICATION DATA:
APPLICATION NUMBER: WO PCT/US97/02588
FILING DATE: 19-FEB-1997
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/011,800
FILING DATE: 21-FEB-1996
                                                                       REFERENCE/DOCKET NUMBER: 01
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 576-0200
                                                                                                                                   ATTORNEY/AGENT INFORMATION:
NAME: Faris, Susan K.
REGISTRATION NUMBER: 41,
                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Wlodawer, TITLE OF INVENTION: NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             119 QVKLQQSGPELKKPGETVKISCKASGYTFTNYGMNWVKQAPGKGLKWNGWINTYTGESTY 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            359 EIK 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          299 QLLIYQMSNLASGVPDRFSSSGSGTDFTLRISRVEAEDVGVYYCAQNLEIPRTFGGGTKL 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181 KRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGTKL 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                 CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY: USA
ZIP: 94111-3834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCNFYGDALDYWGQGTTVTVSSGGGG 120
                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY 60
  ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SGGGGGGGGSDIVLTQSPFSNPVTLGTSASISCRSTKSLLHSNGITYLYMYLQKPGQSP 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SGGGGSGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQSP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDFKGRFAFSLETSASAAYLQINNLKNEDTATYFCARFAIKGDYWGQGTTVTVSSGGGG 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       o, Application US/08875811 6045793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     E: Townsend and Townsend and Crew LLP Two Embarcadero Center, Eighth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Wlodawer, Alexander
366 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Newton, Dian
Boque, Lluis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rybak, Susanna M.
Newton, Dianne L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                     19-FEB-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Recombinant Ribonuclease Proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      64
                                                                                                                                                                                                                                                                                                                                                    US/08/875,811
                                                                                                                                 41,739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             42;
                                                                                                                  015280-244100US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 812; DB 3; I
Pred. No. 3.5e-58;
2; Mismatches 51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; MOLECULE TYPE: protein US-08-875-811-55 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 9
US-08-279-772A-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 8, Application US/08279772A Patent No. 6080560'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
APPLICANT: Russel
APPLICANT: Fuller
                                                              '. TELEPHONE: 698-251-500
"TELEFAX: 608'-251-9166
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                              COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/279,77
                                                                                                            REFERENCE/DOCKET NUMBER: 11
TELECOMMUNICATION INFORMATION:
...TELEPHONE: 608-251-5000
                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
NAME: Seay, Nicholas J.
REGISTRATION NUMBER: 27,386
                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION:
MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               242 EIK 244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241 EIK 243
            TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                COUNTRY: United States of America ZIP: 53701-2113
                                                                                                                                                                                                                                                                                                                                                                                                                 STREET: PO BO:
CITY: Madison
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                               CLASSIFICATION: 435
                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                   STATE: WI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       62 ADDFKGRFAFSLETSASAAYLQINNLKNEDTATYFCARFAIKGDYWGQGTTVTVSSGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
                                            LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 QVQLQQSGAELVRSGASVKLSCTASGENIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SGGGGSGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQSP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCNFYGDALDYWGQGTTVTVSSGGGG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QLLIYQMSNLASGVPDRFSSSGSGTDFTLRISRVEAEDVGVYYCAQNLEIPRTFGGGTKL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SGGGGSGGGSDIVLTQSPFSNPVTLGTSASISCRSTKSLLHSNGITYLYWYLQKPGQSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QVKLQQSGPELKKPGETVKISCKASGYTFTNYGMNWVKQAPGKGLKWMGWINTYTGESTY 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       150;
                             amino
                                              239 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                PO Box 2113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Russell, David
Fuller, James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                Quarles and Brady
                                acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         63.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Method for Producing Antibodies in Plant
Cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    David R
                                                                                                                                                                                                                                                                               Release #1.0, Version #1.25
                                                                                                                                                                                                                                                  US/08/279,772A
                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 812; DB 3;
Pred. No. 3.6e-58;
                                                                                                                                                 11-229-9097-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 366;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241
```

Matches

밁 Š 밁 QΥ В S<sub>Q</sub> 밁 Š

121

밁

120

122

176

```
; MOLECULE TYPE: US-08-902-486-11
                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 11,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -08-902-486-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                        TELEFAX: 608-25
                                                                                                                                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER: 67
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
NAME: Seay, Nicholas J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION:
                                                                                                                                                                                                                 TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        177 KLWIYTTSNLASGVPARFSGSGSGTSYSLTISRMEAEDAATTYCHQRSTYPLTFGSGTKL 236
                                                                       Local Similarity
mes 151; Conser
                                                                                                                                                                                                  TOPOLOGY:
                                                                                                                                                                                                                                                                                                          TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                              REGISTRATION NUMBER: 27386
                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET: 1 Sou
CITY: Madison
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   63 NOKEKDKATLTADKSSSTAYMQLSSLTFEDSAVYYCARGGGVFDYWGQGTTLTVSSGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 APKFOGKATMTADTSSNTAYLQLSSLASEDTAVYYCNFYGDALDYWGOGTTVTVSSGGGG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
                                 1 QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          No.
QVQLQQSGAELAKPGASVKMSCKASGYTFTSYRMHWVKQRPGQGLEWIGYINPSTGYTEY 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ELK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGTKL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SGGGGSGGGSQIVLTQSPAIMSASPGEKVTITCSASSSI-----SYMHWFQQKPGTSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SGGGGSGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQSP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QVQLQQSGAELAKPGASVKMSCKASGYTFTSYRMHWVKQRPGQGLEWIGYINPSTGYTEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                53701-2113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          614007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Application US/08902486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 South Pinckney Street
                                                                                                                                                                                                                                                                                           608-251-9166
                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Russel,
                                                                                                                                                                                                                                                                                                            608-251-5000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Quarles & Brady
                                                                                                                                                                               protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     David R. James T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   James
                                                                                      62.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              METHOD FOR PRODUCING ANTIBODIES AND PROTEIN TOXINS IN PLANT CELLS
15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    62.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         US/08/902,486
                                                                                                                                                                                                                                                                                                                                               670513.90261
                                                                   Score 804; DB 3;
Pred. No. 9.6e-58;
4; Mismatches 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No. 9.6e-58;
4; Mismatches 52;
                                                                                                     Length 239;
                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                     6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 11
US-08-463-163-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                US-08-463-163-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -08-+--
Sequence 3, April
Sequence 3, April
5696237
                                                                                                                        TELEFAX: (415) 543-50
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                            "TELECOMMUNICATION, INFORMATION: TELEPHONE: (415) 543-9600
                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 22-JAN-
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: Patentin Relicuration DATA:
                                                                                                         SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                     FILING DATE: 08-APR-1992 ATTORNEY/AGENT. INFORMATION:
                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           237 ELK 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241 EIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181 KRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGTKL 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/0 FILING DATE: 05-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCNFYGDALDYWGQGTTVTVSSGGGG
                                                                                    LENGTH:
                                                                                                                                                                                                REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                 NAME: Weber, Ellen L. REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US 06/227,227 FILING DATE: 22-JAN-1981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               63 NOKFKDKATLTADKSSSTAYMQLSSLTFEDSAVYYCARGGGVFDYWGQGTTLTVSSGGGG
                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
                                                    ropology:
                                 ECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KLWIYTTSNLASGVPARFSGSGSGTSYSLTISRMEAEDAATYYCHQRSTYPLTFGSGTKL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SGGGGSGGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQSP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SGGGGSGGGSQIVLTQSPAIMSASPGEKVTITCSASSSI-----SYMHWFQQKPGTSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           94105-1492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              San Francisco
                                                                  amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/08463163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             E: Townsend and Townsend and Crew
One Market Plaza, Steuart Street Tower
                                                                                      599 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Queen, Cary L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pastan,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chaudhary, Vijay K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FitzGerald, David J
                                                                                                                                                                                                                                                                                                                                                                                 UMBER: US 06/911,227
                                                                                                                                                                                                                                                                                                                             MBER: US 07/341,361
21-APR-1989
                                                                                                                                             543-5043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ira H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Thomas A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                         US 07/865,722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US/08/463,163
                                                                                                                                                                                                                 32,762
                                                                                                                            ω
                                                                                                                                                                                                  015280-12211
```

밁 δÃ

256

236

136 176 196 76

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QΥ
                                                                                 ; TOPOLOGY: 1:
; MOLECULE TYPE:
US-08-752-844-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-752-844-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 66, Apr---
   Best Local Sin
Matches 154;
                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                TELEX: 706141 (INFORMATION FOR SEQ ID NO:
                                                                                                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 263 amino acids
                                                                                                                                                                                                                             REGISTRATION NUMBER: 40,253
REFERENCE/DOCKET NUMBER: 30.
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 813-5600
                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDLUM TYPE: Floppy disk
COMPUTER: IEM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Foon, Kenneth A.
APPLICANT: Chatterjee, Sunil K.
                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
NAME: Schiff, J. Michael
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181 KRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAGTKL 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241 EIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            176 KLWIYTTSNLASGVPARFSGSGSGTSYSLTISRMEAEDAATYYCHQRSTYPLTFGSGTKL 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            62 NQKFKDKATLTADKSSSTAYMQLSSLTFEDSAVYYCARGGGVFDYWGQGTTLTVSSGGGG 121
                                                                                                                                  TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                             CLASSIFICATION: 424
                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                              LENGTH:
                                                                                                                                                                                                             TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 QVQLQQSGAELVRSGASVKLSCTASGENIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCNFYGDALDYWGQGTTVTVSSGGGG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QVQLQQSGAELAKPGASVKMSCKASGYTFTSYRMHWVKQRPGQGLEWIGYINPSTGYTEY 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SGGGGSGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPGQSP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SGGGGSGGGSQIVLTQSPAIMSASPGEKVTITCSASSSI-----SYMHWFQQKPGTSP 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ELK 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              94304-1018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PALO ALTO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Application US/08752844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             E: MORRISON & FOERSTER
755 PAGE MILL ROAD
                                                                                                                                                                                                               (415) 494-0792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               USA
   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chatterjee, Malaya
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                 linear
                                                                                               protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         62.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MONOCLONAL ANTIBODY 1A7 AND USE TREATMENT OF MELANOMA AND SMALL
                  62.2%;
62.3%;
                                                                                                                                                                                                                                                                                                                                                              US/08/752,844
                                                                                                                                                                                66:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           34;
   36;
                                                                                                                                                                                                                                                                30414-20002.21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 804; DB 1;
Pred. No. 2.8e-57;
Score 801.5; DB Pred. No. 1.7e-576; Mismatches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                  DB 2;
   50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 599;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CELL CAR
                                  263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CARCINOMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6
 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ٠,
   'n
                 ; MOLECULE T
US-08-447-402-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-447-402-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Patent No. 5866344
                                                                                                                INFORMATION FOR SEQ ID NO:
                                                                                                                                             REGISTRATION NUMBER: 33,928
REFERENCE/DOCKET NUMBER: UT
TELECOMMUNICATION INFORMATION:
TELEPHONE: (512) 418-3000
TELEFAX: (512) 474-7577
                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                              SEQUENCE CHARACTERISTICS:
LENGTH: 260 amino acid
                                                                                                                                                                                                                                                                                                                                                          CLÁSSIFICATION: 424
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: Patentin Rel
                                                                                                                                                                                                                                            CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Chen,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                     TELEFAX: 19-0920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            257 GTKLEIK 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           77
                                                                                                                                                                                                                                                                          FILING DATE: 10-JUN-1994
CLASSIFICATION: 424
APPLICATION NUMBER: 07/7:
FILING DATE: 15-NOV-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY: USA .
ZIP: 77210-4433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET: P. O.,
CITY: Houston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                               TOPOLOGY:
                                                                                                                                                                                                            NAME: Kitchell, Barbara S. REGISTRATION NUMBER: 33,928
                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GQSPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTKLEIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGGGSGGGGGGGDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NYHSALISRISKDNSKSQVFLKLNSLQTDDTATYYCAKLGNYDALDYWGQGTSVTVSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EYAPKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYCNFYG--DALDYWGQGTTVTVSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QVQVKESGPFLVPPSQSLSITCTVSGFSLTTYGVSWIRQPPGKGLEWLGAIWGD---GTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GOSPNILIYEVSNRFSGVPDRFSGSGSGTDFTLKISRVEAEDLGVYYCFQGSHVPWTFGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QVQLQQSGAELYRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIG--WIDPENGDT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION:
                                TYPE: protein
                                                             amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Application US/08447402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P. O., Box 4433
                                                                               260 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Iverson, Brent
Georgiou, George
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Arnold,
                                                                                                                                                                                                                                                                                                                                                                                            23-MAY-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gang
                                                                                                                                                                                                                                                                                 424
FR: 07/794,731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IMMUNOASSAY AND ANTIBODY SELECTION METHODS USING CELL SURFACE EXPRESSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LIBRARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                            Release #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            White & Durkee
                                                                                                                                                                                                                                                                                                                                             08/258,543
                                                                                                                                                                                                                                                                                                                                                                                                            US/08/447,402
                                                                                                                <u>..</u>
                                                                                                                                                                                                UTSB:584\KIT
                                                                                                                                                                                                                                                                                                                                                                                                                                              Version #1.30
```

63.8%;

Pred. No.

4.8e-57;

```
멍
; MOLECULE TYPE: US-08-257-341-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-257-341-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 152;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                               NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tent No. 5522.
THERAL INFORMATION:
                                                                              SEQUENCE CHARACTERISTICS:
                                                                                                                                TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS DOS SOTWARE: PATENTIN Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                             FILING DATE: 27-FEB-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: OPPERMANN, HERMANN APPLICANT: TIMASHEFF, SERGE N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241 TKLELK 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              238 TKLEIK 243
                                                                                                                                              NAME: CAMPBELL ESQ, PAULA A REGISTRATION NUMBER: 32,503 REFERENCE/DOCKET NUMBER: CRI
                                                                                                                                                                                                                           APPLICATION NUMBER:
FILING DATE:
APPLICATION NUMBER:
                                  TOPOLOGY:
                                                             LENGTH:
                                                                                                                                                                                                                                                                                                 FILING DATE:
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYC-NFYGD--ALDYWGQGTTVTVSSG 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                TELEPHONE:
                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QPPKLLIYKVSNRFSGVPARFSGSGSESDFTLTIDPVEEDDAAIYYCSQTTHVPPTFGSG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QSPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGGSGGGGGGGGDIVLTQSPASLAVSLGQRATISCRSSQSLVHSNGNTYLNWYQQKPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGGSGGGGGGGGDVLMTQTPLTLSVTIGQPASISCKSSQSLLDSDGKTYLNWLLQRPG 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NQKFKGKATLTVDKSSSTAYMELRSLTSEDSAVYYCAGSSGNKWAMDYWGHGASVTVSSG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EVQLQQSGPELVKPGASVRMSCKSSGYIFTDFYMNWVRQSHGKSLDYIGYISPYSGVTGY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                               01748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HOPKINTON
                                               amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application US/08257341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                E: CREATIVE BIOMOLECULES, INC./PATENT DEPT 35 SOUTH STREET
                                                               246 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HUSTON,
                             linear
                                                                                                             617/248-7000
                                                                                                                                                                                                                                                                                                                                                                                                              Floppy disk
                                                                                                                                                                                                                27-FEB-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JAMES S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SERINE RICH PEPTIDE LINKER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61.9%;
                                                                                                                                                                                                                                us 07/662,226
                                                                                                                                                                                                                                                              US/07/842,149
                                                                                                                                                                                                                                                                                                                               US/08/257,341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               43;
                                                                                                                                               CRP-064CP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 798.5;
Pred. No. 2.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                              Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .9e-57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 2;
                                                                                                                                                                                                                                                                                                                                                                #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2
```

Query Match-

61.7%;

Score 795.5;

DВ

1;

Length 246;

Matches

1 QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY 60

35;

Indels

<u>ა</u>

Gaps

ω

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-133-804-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity Matches 157; Conserv
                                                                                                                                                                                    TELEFAX: 617-248-7100 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION: TELEPHONE: 617-248-7477
                                                                                                                                                                                                                                                     ATTORNEY/AGENT INFORMATION:
NAME: Kelley; Robin D.
REGISTRATION NUMBER: 34,
                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                               TOPOLOGY M linear MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
                                                                                                                                                                                 ZLECOMMING DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      238 TKLEIK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240 TKLEIK 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 -SGSSSSGSSSSGSDVVMTQTPLSLPVSLGDQASISCRSSQSLVHSNGNTYLNWYLQKAG 179
                                                                                                                                IENGTH: 252 amin
                                                                                                                                                                                                                                                                                                                     FILING DATE:
CLASSIFICATION: 424
                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: Boston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PLICANT: Ring, Da
TLE OF INVENTION:
TLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 APKFQGKATMTADTSSNTAYLQLSSLASEDTAVYYC-NFYGD--ALDYWGQGTTVTVSSG 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QSPKLLIYKVSNRFSGVPDRFSGSGSGTDFTLKISRVEAEDLGIYFCSQTTHVPPTFGGG 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGGSGGGGSGGGSDVLMTQTPLTLSVTIGQPASISCKSSQSLLLDSDGKTYLNWLLQRPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NQKFKGKATLTVDKSSSTAYMELRSLTSEDSAVYYCAGSSGNKWAMDYWGHGASVTVSS- 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QVQLQQSGAELVRSGASVKLSCTASGFNIKDYYMHWVKQRPEQGLEWIGWIDPENGDTEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OSPKRLIYLVSKLDSGVPDRFTGSGSGTDFTLKINRVEAEDLGVYYCWQGTHSPLTFGAG 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EVQLQQSGPELVKPGASVRMSCKSSGYIFTDFYMNWVRQSHGKSLDYIGYISPYSGVTGY 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           02109
                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Application US/08133804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Massachusetts
                                                                                                                                                252 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Exchange Place,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Oppermann, h
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Huston, James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Testa,
                                                                                                                                                                                                                                                                                                                                                                                                                                      Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           David B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Imaging
                 61.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hurwitz & Thibeault/Patent Department
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Biosynthetic Binding Proteins
                                                                                                                                                                                                                                                                                                                                                        US/08/133,804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hermann
                                                                                                                                                                                    4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           53 State Street
                                                                                                                                                                                                                                                       2054/22
Score 795.5; DB 1
Pred. No. 4.9e-57;
5; Mismatches 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                      Version #1.25
                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ū
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ψ
```

Search completed: February 12, 2001, 15:23:45 Job time: 59 sec

-

#### THIS PAUL DLANK (USPTO)

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Minimum DB seq
Maximum DB seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10:
11:
12:
13:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7991742 seqs, 3503743858 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IDENTITY_NUC Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-297-181-3
747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      February 18, 2001, 02:00:11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 caggtcaagctgcaggagtc.....gcaccaagctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gb_est1:*
gb_est2:*
gb_est3:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gb_est6:*
gb_est7:*
                                                                             gb_est24 **
gb_est25 **
gb_est26 **
gb_est27 **
gb_est29 **
gb_est29 **
gb_est31 **
gb_est
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gb_est9:*
gb_est10:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gb_est14:*
gb_est15:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                jb_est5:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gb_est11:*
gb_est12:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gb_est20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gb_est16:*
gb_est17:*
                             em_estba:*
em_estfun:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    b_est23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            b_est22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GenCore version 4.5 (c) 1993 - 2000 Comp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Search time 936.51 Seconds (without alignments) 5589.469 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15983484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               em_esthum15:

em_esthum17:

em_esthum18:

em_esthum20:

em_esthum20:

em_estim2:

em_estim2:

em_estim2:

em_estim2:

em_estim2:

em_estim4:

em_estin4:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    em_esthum10:*
em_esthum11:*
em_esthum12:*
em_esthum13:*
em_esthum14:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             em_estp13:*
em_estp14:*
em_estp15:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     em_estpl1:*
em_estpl2:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gb_est46:*
.gb_est47:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                em_estro6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        em_estro1:
em_estro2:
em_estro4:
                                                                                                                                                                                                                                                       gb_est56: *
gb_est67: *
gb_est68: *
gb_est69: *
em_esthum22:*
em_esthum23:*
em_estom1:*
em_estom2:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      em_esthum8:*
em_esthum9:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      em_esthum6:*
em_esthum7:*
                                                                                                                          gb_est72:*
gb_est73:*
gb_est74:*
                                                                                                                                                                                                       gb_est70:*
gb_est71:*
                                                                                                                                                                                                                                                                                                                                                                                                                                    gb_est53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gb_est50:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gb_est49:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gb_est48:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                em_estrol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             em_estro8:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  em_estro5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gb_est51:*
                                                                                                                                                                                                                                                                                                                                                                                    gb_est55:*
                                                                                                                                                                                                                                                                                                                                                                                                              gb_est54:*
```

em\_estp16:\*
em\_estp17:\*
em\_estp18:\*

```
em_gss6:*
em_gss7:*
em_gss8:*
em_gss9:*
em_gss10:*
em_gss11:*
em_gss12:*
em_gss13:*
em_gss14:*
em_gss15:*
em_gss16:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          em_estro14:*
em_estro15:*
em_estro16:*
em_estro17:*
em_estro18:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9b_est63 **
9b_est65 **
9b_est66 **
9b_est76 **
9b_est77 **
9b_est77 **
9b_est78 **
9b_est78 **
9b_est78 **
9b_est81 **
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              em_estro19:*
gb_est58:*
gb_est59:*
gb_est60:*
gb_est61:*
gb_est62:*
                                                                                                                                                                       9b_9ss15:*
9b_9ss16:*
9b_9ss17:*
9b_9ss18:*
9b_9ss18:*
9b_9ss20:*
                                                                                                                                                                                                                                                               gb_gss6:
gb_gss7:*
gb_gss8:*
gb_gss9:*
gb_gss10:*
gb_gss11::*
                                                                                                                                                                                                                                                                                                                                                       em_gss2:*
em_gss3:*
                                                                                                                                                                                                                                                                                                                                                                                   gb_gss3:*
gb_gss4:*
                                                                                                                                                                                                                                                                                                                                                                                                        gb_gss1:*
gb_gss2:*
                                                                                                                                                                                                                                                                                                                                                                                                                           gb_est85:*
gb_est86:*
gb_est87:*
                                                                                                                                                                                                                                           gb_gss13:*
gb_gss14:*
                                                                                                                                                                                                                                                                                                                                   em_gss4:*
gb_gss5:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                        gb_est83:*
gb_est84:*
                                                                                                                                  em_gss5:*
                                                                                                                                                              gb_gss22:*
                                                                                                                                                                                                                                                                                                                                                                           em_gss1:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gb_est82:*
                                                 RESULT 1
BE306420
LOCUS
DEFINITION
 ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Result
                                                                                                                                            45
                                                                                                                                            165.4
BE306420. 1057 bp mRNA EST 13-JUL-2000 601103347F1 NCI_CGAP_Lu29 Mus musculus cDNA clone IMAGE:3495755 5', mRNA sequence. BE306420 BE306420.1 GI:9159604 EST. house mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 190:
191:
192:
193:
                                                                                                                                            22.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gb_gss25: *
gb_gss27: *
gb_gss27: *
gb_gss28: *
                                                                                                                                            457
                                                                                                                                           90
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

# SUMMARIES

	ο	9
224444 37 37 37 37 37 37	1 C C C C C C C C C C C C C C C C C C C	NO N
173.2 173.2 172.2 172.2 171.8 171.4 169.1 168.4 166.4	1 7	
8888888888		
5949 5949 4488 4488 4477 4577	. 4600 3970 44397 4443 4443 4443 4443 4443 4443 444	Length Le
106 90 90 90 90 90 90 90	38 38 38 38 38 38 30 5 17 10 10 10 10 10 10 10 10 10 10 10 10 10	106 95 95 96 96 136 139 139 139 139 139 139 139 139 139
7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AW40693 AV685285 AV685285 AV70263 AV70263 AV70263 AV402346 BF01598 BF01598 AZ50597 AA300651 BE30717 BE30717 AW407856 BE210756 BE210756	ID BE306420 AW405821 AW802126 AW406572 AW406512 AW406512 AW390292 BE850886 AW404610 BE281961 AW951579 BF015548 BF015548 BF368025 BF016722 AW383565 BF286958 AW405977 AW947280
27 C C C C C C C C C C C C C C C C C C C	406939 UI-HF-BLO 685287 AV685287 685285 AV685285 702633 AV702633 702633 AV702633 402364 UI-HF-BLO 2505978 IM034672 2505978 IM034672 2505978 UI-HF-BLO 2505978 UI-HF-BLO 2505978 UI-HF-BLO 2505978 UI-HF-BLO 2505978 UI-HF-BLO 2507170 00109134 2507170 00109134 2507170 00109134	UI-HF-BL UI-HF-BL UI-HF-BL UI-HF-BL CM2-ST01 6 uw89h05 6 uw89h05 1 G0199364 8 uy23a08 8 uy23a08 8 uy23a08 2 uy34h13 2 uy34h13

ALIGNMENTS

```
В
                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
ORIGIN
                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                          δã
                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                          302
                                                                                                                                                                                                                            318
                                                                                                                                                                                                                                                              242
                                                                                                                                                                                                                                                                                               258
                                                                                                                                                                                                                                                                                                                               182
                                                                                                                                                                                                                                                                                                                                                                 198
                                                                                                                                                                                                                                                                                                                                                                                                 122
                                                                                                                                                                                                                                                                                                                                                                                                                                   138
                                            and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
go 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               actatgaatacgacggctatgctttggactactggggccaaggggaccacggtcaccgtct 361
                                                                                                                                                                                                                                            tgcacctcagcagcctgacatctgaggacacaaaccgtctattactgtaatgcagtcatct
                                                                                                                                                                                                                                                                                                               ctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatatg
                                                                                                                                                                                                                                                                                                                                                                                                                                                   cctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagaggc 121
                                                                                                                                                                                                                            TGCAGCTCAGCAGCCTGACATCTGAGGACACTGCCATCTATTACTGTGCTAGAAACCTTT
                                                                                                                                                                                                                                                                                               CCCCGAAGTTCCAGGACAAGGCCACTATAACTGCAGACATCCTCCAACACAGCCTACC
                                                                                                                                                                                                                                                                                                                                                                 CTGAACAGGGCCTGGAGTGGATTGGATGGATCCTGAGGATGGTGAAACTAAATATG
                                                                                                                                                                                                                                                                                                                                                                                                                                   CCTGCACAGCTTCTGGCTTCAACATTAAAGACAGCCTTATGCACTGGGTGAAGCAGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        309;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 http://image.lln1.gov
Plate: LLAM8546 row: n column:
High quality sequence stop: 695.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tissue Procurement: Gilbert Smith, Ph.D.

cDNA Library Preparation: Life Technologies, Inc.

cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 (bases 1 to 1057)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NIH-MGC http://www.ncbi.nlm.nih.gov/MGC/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             274
                                                                                        434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (301) 496-1550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Robert_Strausberg@nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="Organ: lung; Vector: pCMV-SPORT6; Site_1: SalI; Site_2: NotI; Cloned unidirectionally. Primer: Oligo Library constructed by Life Technologies. Investigator providing samples: Gilbert Smith, NIH"

a 289 c 273 g 221 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Stem cell origin.'
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone="IMAGE:3495755"
/clone_lib="NCI_CGAP_Lu29"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /strain="CZECH II (feral)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               'tissue_type="spontaneous tumor, metastatic to mammary.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'db_xref="taxon:10090"
                                                                                                                                                          -GGTGGTTACTACGACTACTGGGGGCCAAGGCACCACTATCACAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .1057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        35.0%;
     641
   đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 261.2; DB 1
Pred. No. 1.8e-66;
   mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        48;
     EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Primer: Oligo dT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1057;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                   197
                                                                                                                                                                                                                                                                                              317
                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        эq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1;
```

```
REFERENCE
AUTHORS
TITLE
                                   Ş
                                                                            밁
                                                                                                              Ş
                                                                                                                                                     g
                                                                                                                                                                                      QΥ
                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                          δõ
                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                     700
                                                                            281
                                                                                                                640
                                                                                                                                                     221
                                                                                                                                                                                          580
                                                                                                                                                                                                                                161
                                                                                                                                                                                                                                                                 520
                                                                                                                                                                                                                                                                                                       101
                                                                                                                                                                                                                                                                                                                                            460
                                                                                                                                                                                                                                                                                                                                                                                                                     400
                                                                                                                                                                                                                                                                                                                                                                                 41
                       tctta---taatctaccgacgttcggcgggggcaccaagctggaaatcaaa 747
                                                                                                gcatccactayggaatctggagtccctgatcgcttcacaggcagtggatctgggacagat
                                                                                                                                                                                                                                                   aattacttgg:cttggtatcagcagaaaccagggcagtctcctaaagtgctgatctactgg
                                                                                                                                                                                                                                                                                                       GAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTCTTTTATACAGCTCCAACAATAAG
                                                                                                                                                                                                                                                                                                                        gagaaggtcgctatgagctgcaaatccagtcagagtctgttcaacagtagaacccgaaag 519
                                                                                                                                                     GCATCTACCCGGGAATCCGGGGTCCCTGACCGATTCAGTGGCAGCGGGTCTGGGACAGAT
                                                                                                                                                                                                                            AACTACTTAG;TTGGTATCAGCAGAAACCAGGGCAGCCTCCTAAGCTGCTCATTTACTGG
                                                                                                                                                                                                                                                                                                                                                                                 GGTGCCTACG3GGACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTGGGC 100
                                                                                                                                                                                                                                                                                                                                                                                                                   ggtggcggatcggacattgagctcacccagtctccatcttccctggctgtgtcagcagga 459
TATTATAGTACTCCTCGGACGTTCGGCCAGGGGACCAAGGTGGAAATCAAA 391
                                                                            TTCACTCTCA:CATCAGCAGCCTGCAGGCTGAGGATGTGGCAGTTTATTACTGTCAGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    UI-HF-BL0-abp-h-07-0-UI.rl NIH_MGC_37 Homo sapiens cDNA clone IMAGE: 3057636\ 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ECO RI site shown at the beginning of the sequence.
Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
CDNA Library Preparation: M.B. Soares Lab
CDNA Library Arrayed by: M.B. Soares Lab
DNA Sequencing by: M.B. Soares Lab
Clone distribution: MGC clone distribution information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 641)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 www-bio.llnl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Robert Stra
Tel: (301) 496-1550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NIH-MGC http://www.ncbi.nlm.nih.gov/MGC/.
National Institutes of Health, Mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AW405821:1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Seq primer: M13 Forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          159
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Robert_Strausberg@nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (Constructed from size fractionated cytoplasmic mRNA (1.5-2.5kb). Directionally cloned. Cells provided by Low M. Staudt, Ph.D. Library preparation by Maria de Fatima Bonaldo, Ph.D. and M. Bento Soares, Ph.D."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ./clone_lib="NIH_MGC_37"
./tissue_type="lymph"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /cell_type=
/cell_line=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone="IMAGE:3057636"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'lab_host="DH10B (LTI)"
'note="Vector: pT7T3-Pac; Site_1: NotI; Site_2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xref="taxon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gov/bbrp/image/image.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          _type="germinal center B
_line="MGC85"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 221.4; DB yv, pred. No. 9.6e-55; """ matches 71;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 90;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cells"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gene Collection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               641;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        can
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                          639
                                                                                                                                                                                                                                                                 579
                                                                                                                                                                                                                                                                                                       160
                                                                                                                                                     280
                                                                                                                                                                                                                                220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        þe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Louis
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ۲.
```

```
Ş
                                                                                     g
                                                                                                                             Ωy
                                                                                                                                                                            Вþ
                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                      В
밁
                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT
AW802126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCUS
                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
184
                                                                                       124
                                                                                                                                                                                                                         461
                                                                                                                                                                                                                                                                                                                   401
                                                                                                                                                                               64
                                                                                                                                                                                                                                                                      4
                                                                                                                                                                                                                                                                                                   gtggcggatcggacattgagctcacccagtctccatcttccctggctgtgtcagcaggag 460
                     catccactagggaatctggagtccctgatcgcttcacaggcagtggatctgggacagatt 640
                                                                                                               attacttggcttggtatcagcagaaaccagggcagtctcctaaagtgctgatctactggg 580
                                                                                                                                                                                                         agaaggtcgctatgagctgcaaatccagtcagagtctgttcaacagtagaacccgaaaga 520
                                                                                                                                                                                                                                                                         GTCGTGACGGGGACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTGGGCG 63
CATCTACCCGGGGATCCCGGGCTGCCGATTCAGTGGCAGCGGGTCTGGGGACAGATT
                                                                                                                                                                               AGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTTATACAGCTCCAACAATAAGA 123
                                                                                     ACTACTTAGCTTGGTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mammalia: Editories, R., Verjovski-Almeida, S., Briones, M.R., I bases I to 533)

Dias Neto, E., Garcia Correa, R., Verjovski-Almeida, S., Briones, M.R., Regai, M.A., da Silva, W. Jr., Zago, M.A., Bordin, S., Costa, F.F., Regai, M.A., da Silva, W. Jr., Matsukma, A., Baia, G.S., Simpson, D.H., Goldman, G.H., Carvalho, A.F., Matsukma, A., Bordeel, C.V., O'Hare Brunstein, A., deoliveira, P.S., Bucher, P., Jongeneel, C.V., O'Hare, M.J., Soares, F., Brentani, R.R., Reis, L.F., de Souza, S.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            533 bp mi
IL5-UM0071-120400-065-d06
AW802126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (http://www.ludwig.org.br/scripts/gethtml2.pl?t1=&t2=IL5-UM0071-120
400-065-d06&t3=2000-04-12&t4=1)
Seq primer: puc 18 forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: asimpson@ludwig.org.br
This sequence was derived from the FAPESP/LICR Human Cancer Genome
Project. This entry can be seen in the following URL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tel:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research .
Rua Prof. Antonio Prudente 109, 4 andar, 01509-010,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Simpson, A.J.
Shotgun sequencing of the human transcriptome with ORF expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; I
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AW802126.1
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fax: +55-11-2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Simpson A.J.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sequence tags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         quality sequence stop: 419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             +55-11-2704922
                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Natl. Acad. Sci. U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                note "Organ: uterus; Vector: pucl8; Site_1: SmaI; Site_2: SmaI; A mini: library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196,716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector: Reverse transcription of tissue mRNA and cDNA amplification were performed under low stringency conditions."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /dev_stage="Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone_lib="UM0071"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                        28.6%;
77.7%;
                                                                                                                                                                                                                                                                                                                                                            Score 214; DB 95; I
Pred. No. 1.4e-52;
Pred. No. 1.5 75;
                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          UM0071 Homo sapiens cDNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (7),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3491-3496 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                         Length 533;
                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sao Paulo-SP,
                                                                                                                                                                                                                                                                                                                                                                Ψ
                                                                                     183
243
                                                                                       •
```

```
, 0y
                                                                                                                                       δÃ
                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
TITLE
       Š
                                                                            밁
                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AW406572
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                  460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                     400
580 gcatccactagggaatctggagtccctgatcgcttcacaggcagtggatctgggacagat 639
                                                                                169
                                                                                                                     520 aattacttggcttggtatcagcagaaaccagggcagtctcctaaagtgctgatctactgg 579
                                                                                                                                                                                                                    701 ctta---taatctaccgacgttcggcgggggcaccaagctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              304 ATTATAGTACTCCCCTCACTTTCGGCGGAGGGACCAAGGTGGAGATCAAA
                                                                                                                                                                                                                                                                                                                                                               49
                                                                            AACTCCTTAACTTGGTACCAGCTGAAACCAGGACAGCCTCCTAAGATGATCATTTACTGG
                                                                                                                                                                                                                                                                                      gagaaggtcgctatgagctgcaaatccagtcagagtctgttcaacagtagaacccgaaag
                                                                                                                                                                                                                                                                                                                                                                                                ggtggcggatcggacattgagctcacccagtctccatcttccctggctgtgtcagcagga 459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGTGCCTACGGGGACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTGGGC 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGCAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AW406572 508 bp mRNA EST UI-HF-BL0-acu-g-10-0-UI.rl NIH_MGC_37 Homo sapiens IMAGE:3060307 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eco RI site shown at the beginning of the sequence. Tissue Procurement: Louis M. Staudt, M.D., Ph.D. cDNA Library Preparation: M.B. Soares Lab cDNA Library Arrayed by: M.B. Soares Lab DNA Sequencing by: M.B. Soares Lab Clone distribution: MGC clone distribution information found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NIH-MGC http://www.ncbi.nlm.nih.gov/MGC/.
National Institutes of Health, Mammalian Gene Collection
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Seq primer: M13 Forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             www-bio.llnl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AW406572.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similar4.ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 508)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (301) 496-1550
L: Robert_Strausberg@nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /lab_host="DH10B (LTI)"
//note="Vector: pT/T3-Pac; Site_1: Not1; Site_2: Eco RI;
//note="Vector: Site_1: Not1; Site_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /cell_type="germinal center B
/cell_line="MGC85"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone="IMAGE:3060307"
/clone_lib="NIH_MGC_37"
/tissue_type="lymph"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xref="taxon:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gov/bbrp/image/image.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           27.78;
76.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 207; DB 90;
Pred. No. 1.7e-50;
0; Mismatches 80;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cells'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 508;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16-FEB-2000
CDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                             519
                                                                                228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 by Louis
```

ζ.

```
RESULT
AW406512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
ORGANISM
                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
VERSION
                                                         Ş
                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pocas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches 270;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                       453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           349
                                                                                                                                                                                                                                                                                                                                                                                   393 ctctggcggtggcggatcggacattgagctcacccagtctccatcttccctggctgtgtc 452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ç
                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                 agcaggagaggaggtcgctatgagctgcaaatccagtcagagtctgttcaacagtagaac 512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ccgaaagaattacttggcttggtatcagcagaaaccagggcagtctcctaaagtgctgat
                                                                                                                                            CACGAGGGGTGCCTACGGGGACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATCATAGTATTCCGTACACTTTTGGCCAGGGGACCAAGCTGGAGATCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tottataatotacog---acgttcggcgggggcaccaagctggaaatcaaa 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTCACTCTCACCATCAGCGGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGCAA 348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AW406512 630 bp mRNA
UI-HF-BLO-acu-a-09-0-UI.rl NIH_MGC_37
IMAGE:3060017 5', mRNA sequence.
AW406512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eco RI site shown at the beginning of the sequence. Tissue Procurement: Louis M. Staudt, M.D., Ph.D. CDNA Library Preparation: M.B. Soares Lab CDNA Library Arrayed by: M.B. Soares Lab DNA Sequencing by: M.B. Soares Lab Clone distribution: MCC clone distribution informations of the sequence of the sequ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    found through the I.M.A.G.E. Consortium/LLNL www-bio.llnl.gov/bbrp/image/image.html Seg primer: M13 Forward.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tel:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 630)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NIH-MGC http://www.ncbi.nlm.nih.gov/MGC/.
National Institutes of Health, Mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AW406512.1 GI:6925569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (301) 496-1550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Robert_Strausberg@nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /lab_host="DH10B (LTI)"
/note="Vector: pT7T3-Pac; Site_1: NotI; Site_2: Eco RI;
/note="Vector: pT7T3-Pac; Site_1: NotI; Site_2: Eco RI;
/note="Vector: pT7T3-Pac; Site_1: NotI; Site_2: Eco RI;
/note="Vector size fractionated cytoplasmic mRNA
/note-size fractionated cytop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /cell_type="germinal center B cells"
/cell_line="MGC85"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone="IMAGE:3060017"
/clone_lib="NIH_MGC_37"
/tissue_type="lymph"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27.6%;
75.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 206;
Pred. No. 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 90;
3.5e-50;
nes 85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 630;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   16-FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           can
                                                     572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            by Louis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           be
```

Ωy

gagaaggtegetatgagetgeaaateeagteagagtetgtteaacagtagaaceegaaag 519

GGTGCCTACGGGGACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTGGGC 116

GAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTATTTTATACAACTCCAAAAATAAG

57

В

460 117

```
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT
AW390292
                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Вþ
                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SDOO
                                                   Matches
                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                          source
                  400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
ggtggcggatcgga@attgagctcacccagtctccatcttccctggctgtgtcagcagga 459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCAGCAATATTATAGTATTCCCTTCACCTTCGGCCAAGGGACACGACTGGAGATTAAA 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              caagcaatcttataatctacc---gacgttcggcgggggcaccaagctggaaatcaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAATAAGAAT;TTCTTAGTTTGGTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GACAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTG
                                                 al Similarity
267; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HCGP http://www.ludwig.org.br/ORESTES.
The FAPESP/LICR Human Cancer Genome Project
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                              221099-023-f04&t3=1999-10-22&t4=1)
Seq primer: puc 18 forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: asimpson@ludwig.org.br
This sequence was derived from the FAPESP/LICR Human Cancer Genome
Project. This entry can be seen in the following URL
(http://www.ludwig.org.br/scripts/gethtml2.pl?tl=CM2&t2=CM2-ST0182-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tel: +55;11-2704922
Fax: +55-11-2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rua Prof; Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AW390292 643 bp mRNA EST CM2-ST0182-221099-023-f04 ST0182 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Brazil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Simpson A.J.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AW390292.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AW390292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         numan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (bases 1 to 643)
                                                                                                                                                            162
                                                                                                                                                                                                                                                                                                                                                                                        quality sequence start: 7 quality sequence stop: 641.
Location/Qualifiers
                                                     Conservative
                                                                                                                                                            Ŋ
                                                                                                                                                                                                        /note="Organ: stomach; Vector: puc18; Site_1: SmaI; Site_2: SmaI, A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196,716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of
                                                                                                                                                   tissue mRNA and cDNA amplification were performed under low stringency conditions."
173 c 162 g 146 t
                                                                                                                                                                                                                                                                                                                    /db_xref="taxon:9606"
/clone_lib="ST0182"
                                                                                                                                                                                                                                                                                                    /dev_stage="Adult"
                                                                                                                                                                                                                                                                                                                                                       /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GI:6894951
                                                                     27.5%;
76.1%;
                                                   0;
                                                                    Score 205.4;
Pred. No. 5.3
                                                     Mismatches
                                                                     .3e-50;
                                                                                      DB 89;
                                                   81;
                                                   Indels
                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        04-FEB-2000
cDNA, mRNA sequ
                                                                                    643;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Euteleostomi:
                                                   υ
                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                   ۲.
```

```
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT
BE850886
   δÃ
                                           Дb
                                                                                                                                                                                                                BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                 Query Match
Best Local S
Matches 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                580
                                                                            Ĺ
     61
                                             ü
                                                                                                                                     Local Similarity
                                                                  caggtcaagctgcaggagtcagggggcagaacttgtgaggtcagggggcctcagtcaatttg 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagagg 120
                                           CAGGTCCAACTGCAGCCTGGGGCTGAGCTTGTGAAGCCTGGGGCTTCAGTGAAGCTG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATTTTAGTCATCCTCAAACGTTCGGCCAAGGGACCAAGGTGGAAATCAAA 407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tcttata---atctaccgacgttcggcgggggcaccaagctggaaatcaaa 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCATCTACGCGGAAATCCGGGGTCCCTGACCGATTCAGTGGCAGCGGGTCTGCGACAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gcatccactagggaatctggagtccctgatcgcttcacaggcagtggatctgggacagat 639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AACTACTTAGCTTGGTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCTTTACTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 uw89h05.yl Soares_mammary_gland_NMLMG Mus musculus cDNA clone IMAGE:3469209 5' similar to SW:HV07_MOUSE P01751 IG HEAVY CHAIN V REGION B1-8/186-2 PRECURSOR. ;, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Onpublished (1997)
Contact: Robert Strausberg, Ph.D.
Tel: (301) 496-1550
Email: Robert_Strausberg@nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae. 1 (bases 1 to 358)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MGI:1388569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BE850886.1 GI:10309225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BE850886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BE850886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IMAGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tumor Gene Index
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      primer: -40RP from Gibco.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   clone is available
                                                                                                                     Conservative
                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             clone is available royalty-free through Consortium (info@image.llnl.gov) for fu
                                                                                                                                                                                                                                   ø
                                                                                                                                                                                                                              /note-"Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; 1st strand cDNA was prepared from mammary gland tissue from a lactating female, and was then primed with a Not I - oligo(dT) primer. Double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT7T3 vector. Library is normalized. Library was constructed by Bento Soares and M. Fatima Bonaldo. " 93 g 79 t
                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone_lib-"Soares_mammary_gland_NMLMG"
/sex-"female (lactating)" ____
                                                                                                                                                                                                                                                                                                                                                                                                   /tissue_type="mammary gland"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone="IMAGE:3469209"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Mus musculus"
/db_xref="taxon:10090"
                                                                                                                                   27.48;
74.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ģ
                                                                                                              Score 204.4; DB 130
Pred. No. 8.8e-50;
"" matches 86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mRNA
                                                                                                                                                       DB 136;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               further i
                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Muridae;
                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Euteleostomi;
                                                                                                                   <u>ه</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Murinaė;
                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus.
```

```
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
AW404610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뭕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                ORIGIN
                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatat 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tcct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TACGGTAGTAGCTACGAGGACTACTTTGACTACTGGGGCCAAGGCCACCACTCTCACAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tactatgaathcgacggctatgctttggactactgggggccaagggaccacggtcaccgtc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCCTGCAAGGCTTCTGGCTACACCTTCACCAGCTACTGGATGCAGTGGGTAAAACAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AATCAAAAGTTCAAGGGCAAGGCCACATTGACTGTAGACACATCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AW404610
AW404610:1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AW404610 550 bp mRNA ES: UI-HF-BL0-acc-a-06-0-UI.rl NIH_MGC_37 Homo IMAGE: 3058451 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                        Eco RI site shown at the beginning of the seq
Tissue Procurement: Louis M. Staudt, M.D., P
CDNA Library Preparation: M.B. Soares Lab
CDNA Library Arrayed by: M.B. Soares Lab
DNA Sequencing by: M.B. Soares Lab
Clone distribution: MGC clone distribution i
found through the I.M.A.G.E. Consortium/LLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Cranlata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; 1 (bases 1 to 550)
                                                                                                                                                                                                                                                                                                                                           Seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unpublished (1999)
Contact: Robert Stra
Tel: (301) 496-1550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Emaíl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NIH-MGC http://www.ncbi.nlm.nih.gov/MGC/.
National Institutes of Health, Mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                            www-bio.llnl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          358
                                                                                 140
                                                                                                                                                                                                                                                                                                                                           primer: M13 Forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           : Robert_Strausberg@nih.gov
                                                                            /lab_host="DH10B (LTI)"
/note="Vector: pT7T3-Pac; Site_1: NotI; Site_2: Eco RI;
/note="Vector: pT7T3-Pac; Site_1: NotI; Site_2: Eco RI;
/constructed from size fractionated cytoplasmic mRNA
/1.5-2.5kb). Directionally cloned. Cells provided by Lo
M. Staudt, Ph.D. Library preparation by Maria de Fatima
Bonaldo, Ph.D. and M. Bento Soares, Ph.D."
                                                                                                                                                                                                                                                           /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:3058451"
                                                                                                                                                                                                            /cell_type-
                                                                                                                                                                                           cell_type="germinal center/cell_line="MGC85"
                                                                                                                                                                                                                               /clone_lib="NIH_MGC_37"
/tissue_type="lymph"
                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                          .gov/bbrp/image/image.html
27.3%;
75.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Strausberg, Ph.D.
203.8;
No. 1.5
                                                                                                                                                                                                                 B cells"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                            sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sapiens
                                                                                                                                                                                                                                                                                                                                                                                              information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                              can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
```

Best Local Similarity

Score Pred.

.5e-49; BB

90;

Length

Query Match

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
BE281961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 rocus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATTATAGTACTCCCATCACCTTCGGCCAAGGGACACGACTGGAGATTAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | tettataatetaee---gaegtteggegggggeaeaagetggaaateaaa 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gcatccactagggaatctggagtccctgatcgcttcacaggcagtggatctgggacagat 639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           aattacttggcttggtatcagcagaaaccagggcagtctcctaaagtgctgatctactgg 579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTTATACAGCTCCAACAATAAG 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gagaaggtcgctatgagctgcaaatccagtcagagtctgttcaacagtagaacccgaaag 519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGTGCCTACGGGGACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTGGGC 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ggtggcggatcggacattgagctcacccagtctccatcttccctggctgtgtcagcagga 459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGGCAGTTTATTATTGTCAGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCATCTACCCGGGGAATCCGGGGTCCCTGACCGATTCAGTGGCAGCGGGTCTGGGGACAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AACTACTTAGCTTGGTACCAGCAGAAACCAGGACAGCCTCCTAAACTGCTCATTTACGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        266;
                                                                                                                                                                                                                                                                                                                                                       Tissue Procurement: Gilbert Smith, Ph.D.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can

found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
1 (bases 1 to 644)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BE281961 644 bp mRNA
601099518F1 NCI_CGAP_Lu29 Mus
mRNA sequence.
BE281961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Robert Strausberg, Ph.D. Tel: (301) 496-1550
                                                                                                                                                                                                                                                                                                                      http://image.llnl.gov
Plate: LLAM8537 row:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NIH-MGC http://www.ncbi.nlm.nih.gov/MGC/.
National Institutes of Health, Mammalian Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BE281961.1 GI:9157200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished (1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    house mouse
                                                                                                                                                                                                                                                                                                  quality sequence stop: 561.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Robert_Strausberg@nih.gov
               /note-"Organ: lung; Vector: pCMV-SPORT6; Site_1: SalI; Site_2: NotI; Cloned unidirectionally. Primer: Oligo dT. Library constructed by Life Technologies. Investigator providing samples: Gilbert Smith, NIH" a 176 c 155 g 166 t
                                                                                                                             /tissue_type="spontaneous tumor, metastatic to mammary stem cell origin."
                                                                                                                                                                  /strain="CZECH II (feral)"
/db_xref="taxon:10090"
/clone="IMAGE:3492028"
/clone_lib="NCI_CGAP_Lu29"
                                                                                                                                                                                                                                             /organism="Mus musculus"
                                                                                                           'lab_host="DH10B"
                                                                                                                                                                                                                                                                              ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                      row: c column:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EST musculus cDNA clone
                                                                                                                                                                                                                                                                                                                        05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      82;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Collection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13-JUL-2000
IMAGE:3492028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ω,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>ن</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŗ
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 10
AW951579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                β
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ωy
                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                    ORIGIN
                                                                                BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Snoor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Dest Local S
Matches 274
Query Match
Best Local S
Matches 264
                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               accgtctcctcag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCCATCTACTATGGTTACGGCCTCTACTACTTTGACTACTGGGGCCCAAGGCCACCTATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gtcatctactatgaatacgacggctatgctttggactactggggccaagggaccacggtc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATGCAGCTCAACAGCCTGACATCTGAGGATTCTGCAGTGTATTTCTGTGCAAGAGGGGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ctgcacctcagcagcctgacatctgaggacaccatctattactgt-----aatgca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatat 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCTGCAAGGTTTCTGGCTACACCTTCACTGACCATACTATTCACTGGGTGAAGCAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tcctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagagg 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACAGTCTCCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCTGAACAGGGCCTGGAATGGATTGGATATTTTATCCTAGAGATGGTAGTACTAAGTAC
 264;
                                                                                                                                                                          Email: johnq@tigr.org
Plate: 29
Seq primer: Reverse.
                                                                                                                                                                                                                   Unpublished (2000)
Contact: John Quackenbush
Contact: John Quackenbush
The Institute for Genomic Research
9712 Medical Center Dr., Rockville,
Tel: 301 838 3528
Fax: 301.838 0208
                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 388)

Hegde, P., Qi, R., Abernathy, K., Dharap, S., Gaspard, R., Gay, C., Holi, I.E., Saed, A.I., Sharov, V., Lee, N.H., Yeatman, T.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AW951579: 388 bp mRNA EST 01-JUN-2000 EST363649 MAGE resequences, MAGB Homo sapiens cDNA, mRNA sequence. AW951579
                                                                                                                                                                                                                                                                                                    Assessment of gene expression patterns metastasis using a 19,200 element cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                 Quackenbush,J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         AW951579..1
               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                             numan.
  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                  87
                                                                               ./organism="Homo sapiens"
./db_xref="taxon:9606"
./clone_lib="MAGE resequences, I
./note="Vector: pBluescriptSKm"
a 110 c 97 g 94 t
                                                                                                                                                     Location/Qualifiers
1. .388
                                                                                                                                                                                                                                                                                                                                                                                                                                                         GI:8141256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  27.1%;
              27.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 202.2; DB 100
Pred. No. 4.7e-49;
Pred. No. 4.7e-49;
  0,:
              Score 201.8; DB 9
Pred. No. 5.3e-49;
  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 106;
                            DB 97;
                                                                                                                                                                                                                                                 ₹
                                                                                                                                                                                                                                                                                                    in a model of colon microarray
                                                                                                                                                                                                                                                 20850,
 Indels
                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                 USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   644;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6
  ω
--
  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                  tumor
                                                                                                                                                                                                                                                                                                                                                            HOLD
  ا...
د..ا
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1;
```

DB 139;

Length

507;

۲,

```
BASE CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 1
BF015548
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
              COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATTATTATACTCCGTACAATTTTGGCCAGGGGACCAAGCTGGAAATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      aattacttggcttggtatcagcagaaaccagggcagtctcctaaaagtgctgatctactgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGAGGGCCACCATCAACTGCAGGTCCAGCCAGAGTGTTTTAGACAGCTCCAACAATACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gagaaggtcgctatgagctgcaaatccagtcagagtctgttcaacagtagaacccgaaag 519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ggtggcggatcggacattgagctcacccagtctccatcttccctggctgtgtcagcagga 459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTCACTCTCACCCTCAGCGGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCATCTACCCGGGAATCCGGGGTCCCTGACCGATTCAGTGGCAGCGGGTCTGGGACAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gcatccactagggaatctggagtccctgatcgcttcacaggcagtggatctgggacagat 639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AACTACTTAGCTTGGTACCAACTGAAACCAGGACAGCCTCCTAAGCTGCTCATTTACTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGTGCCTACGGGGACACCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTCTCTGGGC
                                                                                                                                                                                                                                               MGI:1421142
Seq primer:
High quality
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BF015548 507 bp mRNA EST 10-OCT-2000 uy23a08.y1 NCI_CGAP_Lu30 Mus musculus cDNA clone IMAGE:3658670 similar to SW:HV14_MOUSE P01758 IG HEAVY CHAIN V REGION 108A PRECURSOR. ;, mRNA sequence.
                                                                                                                                                                                                                                                                                                           CDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Washington University Genome Sequencing Center Clone distribution: NCI-CGAP clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: image.llnl.gov/image/html/iresources.shtml
                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Robert Strausberg, Ph.D. Tel: (301) 496-1550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BF015548
BF015548.1
                                                                                                                                                                                                                                                                                                                                                                                                           Tissue Procurement: Gilbert Smith, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                             Email:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tumor Gene Index
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 house mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (bases 1 to 507)
                                                                                                                                                                                                                                  primer: -40RP from Gibco h quality sequence stop: Location/Qualifiers
                123
                                                                                                                                                                                                                                                                                                                                                                                                                         Robert_Strausberg@nih.gov
           /note-"Organ: lung; Vector: pCMV-SPORT6; Site_1: Not1; Site_2: Sall; transgenic model WNT-1, expression driven by MMTV-LTR enhancer; cloned uniformally. Primer: Oligo dT. Library constructed by Life Technologies. Investigator providing samples: Gilbert Smith, NIH" 138 c 126 g 120 t
                                                                                                        /strain="CZECH II"
/db_xref="taxon:10090"
/clone="IMAGE:3658670"
/clone_lib="NCI_CGAP_Lu30"
/tissue_type="tumor, metastatic to mammary"
/lab_host="DH10B"
                                                                                                                                                                                      /organism="Mus musculus"
/strain="CZECH II"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GI:10746880
                                                                                                                                                                                                                                                   456.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata; Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Euteleostomi;
; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             σį
                                                                                                                                                                                                                                                                                                                                              ğ
                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
TITLE
                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 1
AW406484
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 271
                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N
```

```
aggtcaagctgcaggagtcaggggcagaacttgtgaggtcaggggcctcagtcaatttgt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCTCAGCT 457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           coccyaactt:ccayggcaaggccactgtgactgcagacacatcctccaacacagcctacc 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagaggc 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGGTCCAGCTGCAACAGTCTGGACCTGAGCTGGTGAAGCCTTGGGGGCTTCAGTGAAGATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cctcaggt 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACAGTGGTAGCTACTGGTA---CTTCGATGTCTGGGGCGCAGGGACCACGGTCACCGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGGAGCTCAACAGCCTGACATCTGAGGACTCTGCAGTCTATTACTGTGCAAGATATTACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCTGCAAGGCTTCTGGATACACATTCACTGGCTACTACATGCACTGGGTGAAGCAGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tgcacctcagcagcctgacatctgaggacacaaccgtctattactgtaatgcagtcatct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGGAAAGAGCCTTGAGTGGATTGGACTTGTTAATCCTAGCAATGGTGATACTAGCTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        271;
                                                                                                                                                                                                                                     Email: Robert_Strausberg@nih.gov
Eco RI site shown at the beginning of the sequence.
Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
cDNA Library Preparation: M.B. Soares Lab
cDNA Library Arrayed by: M.B. Soares Lab
DNA Sequencing by: M.B. Soares Lab
Clone distribution: MGC clone distribution information
found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 328)

NIH-MCC http://www.ncbi.nlm.nih.gov/MGC/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AW406484 328 bp mRNA EST UI-HF-BL0-acr-f-09-0-UI.rl NIH_MGC_37 Homo sapiens IMAGE:3060232 5', mRNA sequence.
                                                                                                                                                                                             www-bio.llni.gov/bbrp/image/image.html
Seq primer: M13 Forward.
                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Robert Str
Tel: (301) 496-1550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AW406484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AW406484.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
/clone_lib="NIH_MGC_37"
/tissue_type="lymph"
/cell_type="germinal center
/cell_line="MGC85"
                                                                                      /db_xref="taxon:9606"
/clone="IMAGE:3060232"
                                                                                                             /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GI:6925541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          27.0%;
73.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                              Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 201.6; DB 1
Pred. No. 6.6e-49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                            w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        94;
                            cells"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16-FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ω
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       449
                                                                                                                                                                                                                                                                  ьe
```

by Louis

1;

```
RESULT 1
BE368025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ttggtatcagcagaaaccagggcagtctcctaaagtgctgatctactgggcatccactag 590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ggacattgagctcacccagtctccatcttccctggctgtgtcagcaggaggagagaaggtcgc 470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ggaatctggagtccctgatcgcttcacaggcagtggatctgggacagatttcactctcac 650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CATCAACTGCAAGTCCAGCCAGAGTGTTTTATACAGCTCCAACAATAAGAGCTACTTAGC 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tatgagctgcaaatccagtcagagtctgttcaacagtagaacccgaaagaattacttggc 530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CATCAGCAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGCAATATTATAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGAATCCGGGGTCCCTGACCGATTCAGTGGCAGCGGGTCTGGGACAGATTTCACTCTCAC 254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTGGTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTACCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTGGGCGAGAGGGCCAC 74
                                                                                                                                                                                                                                                                                                   Tissue Procurement: Gilbert Smith, Ph.D.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 (bases 1 to 464)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mRNA sequence.
BE368025
                                                                                                                                                                                                                                                                                                                                                                                                                               NIH-MGC http://www.ncbi.nlm.nih.gov/MGC/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BE368025 464 bp mRNA
601221914F1 NCI_CGAP_Lu29 Mus
                                                                                                                                                                                                                               found through the I.M.A.G.E. Consortium/LLNL http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                               Email:
                                                                                                                                                                                                                                                                                                                                                                                             Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished (1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BE368025.1 GI:9313388
                                                                                                                                                                                                                  Plate: LLAM8759 row: k column:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              house mouse.
                                                                                                                                                                                                                                                                   DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can
                                                                                                                                                                                               quality sequence stop: 462.
                                                                                                                                                                                                                                                                                                                                                                              (301) 496-1550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         78
                                                                                                                                                                                                                                                                                                                                                            Robert_Strausberg@nih.gov
                                                                 /organism="Mus musculus"
/strain="CZECH II (feral)"
/db_xref="taxon:10090"
/clone="IMAGE:350907"
/clone_lib="NCI_CGAP_Lu29"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="Vector: pT7T3-Pac; Site_1: NotI; Site_2: Eco RI; Constructed from size fractionated cytoplasmic mRNA (1.5-2.5b). Directionally cloned. Cells provided by Low M. Staudt, Ph.D. Library preparation by Maria de Fatima Bonaldo, Ph.D. and M. Bento Soares, Ph.D."

84 g 74 t
                                   Stem
                               /tissue_type="spontaneous
Stem cell origin."
                    /lab_host="DH10B"
                                                                                                                                                                             ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26.8%;
79.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score
Pred.
lung; Vector: pCMV-SPORT6; Site_1: SalI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        e 200.4; ub ...
1. No. 1.3e-48;
1. hes 61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       musculus
                                                                                                                                                                                                                  04
                                                    tumor,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST
                                                    metastatic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21-JUL-2000
IMAGE:3590907 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                    to mammary.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
```

```
REFERENCE
                                                                                                                                                                                                                                                                                                SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 1
BF016722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
    FEATURES
                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                 Snoo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity Matches 272; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 caggtcaagctgcaggagtcaggggcagaacttgtgaggtcagggggcctcagtcaatttg 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gtcatctactatgaatacgacggctatgctttggactactggggccaagggaccacggtc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cctgaagagggcctggagtggattggatatattgatcctgagagtggtgaaactgaatat 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     toctgcacagcttctggcttcaacattaaagactactatatgcactgggtgaaacagagg 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   accgtctcctcag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCATCTACTATGGTTACGGCCTCTACTACTTTGACTACTGGGGCCCAAGGCACCACTATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGCAGCTCAACAGCCTGACATCTGAGGATTCTGCAGTGTGTTTCTGTTCAAGAGGGGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacacagcctac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAGGTTCAGCTGCAACAGTCTGACGCTGAGTTGGTGAAACCTGGAGCTTCAGTGAAGATT 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACAGTCTCCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AATGAGAAGTTCAAGGGCCAGGCCACATTGACTGCAGATAAATCCTCCAGCACTGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCTGAACAGGGCCTGGAATGGATTGGATATTTATCCTAGAGATGGTAGTACTAAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCCTGCAAGGTTTCTGGCTACACCTTCACTGACCATACTATTCACTGGGTGAAGCAGAGG
                                                             BF016722:
BF016722:1
                                                                                                                                                                                                                                                                                                                                                                                 BF016722 406 bp mRNA uy34h12.y1 NCI_CGAP_Lu30 Mus mus similar to SW:HV02_MOUSE P01746
                                                                                                                                                                    Tumor Gene Index
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Tel: (301) 496-1550
              Seq
                                                                                                                                                                                                                            NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National_Cancer Institute, Cancer Genome Anat
                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammmalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 (bases 1 to 406)
                                                                                                                                                                                                                                                                                                 Mus musculus
                             MGI:1422279
                                                       image.llnl.gov/image/html/iresources
                                                                                                                                                                                                                                                                                                                house mouse.
                                                                                                                                                                                                                                                                                                                                                                  PRECURSOR. ;, mRNA sequence.
primer: -40RP from Gibco.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          providing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Site_2: NotI; Cloned unidirectionally. Putibrary constructed by Life Technologies.
                                                                                                                                                                                                                                                                                                                                          GI:10748054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26.6%;
72.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     samples: Gilbert Smith, NIH"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 199; DB 107
Pred. No. 3.8e-48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                    musculus cDNA clone
746 IG HEAVY CHAIN V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 107;
                                                                                                                                                                                                                              Anatomy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                 10-OCT-2000
IMAGE:3660143
                                                                                                                                                                                                                              Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Primer: Oligo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   464;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Investigator
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             294
                                                                                                                                                                                                                                                                                                                                                                                                    ώ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ďī.
```

source

```
DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 1
AW383565
                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
source .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241 ctgcacctcagcagcctgacatctgaggacacaaccgtctattactgt 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         93 CAGGTCCAGCTGCAGCAGTCTGGGGGCTGAACTGGCAAAACCTGGGGCCTCAGTGAAGATG 152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 caggtcaagctgcaggagtcaggggcagaacttgtgaggtcagggggcctcagtcaatttg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gccccgaacttccagggcaaggccactgtgactgcagacacatcctccaacacacagcctac 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGCAACTGAGCAGCCTGACATCTGAGGACTCTGCAGTCTATTACTGT 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cctgaagagggcctggagtggattggatatatttgatcctgagagtggtgaaactgaatat 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCCTGCAAGGCTTCTGGCTACACCTTTACTAGCTACTGGATGCACTGGGTAAAACAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          teetgeacagettetggetteaacattaaagaetaetatatgeaetgggtgaaacagagg 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AATCAGAAGTTCAAGGACAAGGCCACATTGACTGCAGACAAATCCTCCAGCACAGCCTAC 332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCTGGACAGGGTCTGGAATGGATTGGATACATTAATCCTAGCAGTGGTTATACTGAGTAC
                      Seq primer: puc 18 forward
High quality sequence start: 10
High quality sequence stop: 441.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                              Contact: Simpson A.J.G.
Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
                                                                                                                   This sequence was derived from the FAPESP/LICR Human Cancer Genome Project. This entry can be seen in the following URL (http://www.ludwig.org.br/scripts/gethtml2.pl?tl=PM4&t2=pM4-HT0348-261199-001-B11&t3=1999-11-26&t4=1)
                                                                                                                                                                                                                                                                                                                                                                                                              HCGP http://www.ludwig.org.br/ORESTES.
The FAPESP/LICR Human Cancer Genome Project.
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AW383565 459 bp mRNA EST 04-FEB-2000 pM4-FF0348-261199-001-B11 HT0348 Homo sapiens cDNA, mRNA sequence. AW383565 AW383565.1 GI:68888133
                                                                                                                                                                                                                 Email: asimpson@ludwig.org.br
                                                                                                                                                                                                                                                                                            Brazil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      109
                                                                                                                                                                                                                                             +55-11-2704922
+55-11-2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note="Organ: lung; Vector: pCMV-SPORT6; Site_1: Not1; Site_2: Sali; transgenic model WNT-1, expression driven by MMTV-LTR enhancer; Cloned unidirectionally. Primer: Oligo dT. Library constructed by Life Technologies. Investigator providing samples: Gilbert Smith, NIH" 102 c 98 g 97 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /tissue_type="tumor, metastatic to mammary"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone="IMAGE:3660143"
/clone_lib="NCI_CGAP_Lu30"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /strain="CZECH II"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism-"Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 196.8; DB 139; Lengt
Pred. No. 1.6e-47;
0; Mismatches 57; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 406;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
```

Search completed: February 18, 2001, 02:00:14 Job time: 13898 sec

밁 δÃ 밁 Š 8 Q ₽ δÃ 밁 Š

```
Š
                               Š
                                                                       밁
                                                                                                     δÃ
                                                                                                                                          밁
                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                       S
V
                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                            Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 78.9
Matches 245; Conservative
 316
                                   736
                                                                                                                                            196
                                                                                                                                                                              619
                                                                                                                                                                                                                  136
                                                                                                                                                                                                                                                     559
                                                                                                                                                                                                                                                                                                                         499
                                                                                                                                                                                                                                                                                                                                                                                                439
                                                                       256
                                                                                                                                                                                                                                                                                         76
                                                                                                                                                                                                                                                                                                                                                            16
                                                                                                                                                                                                                                  cctaaagtgctgatctactgggcatccactagggaatctggatccctgatcgcttcaca 618
                                                                                                                                                                                                                                                                                                          ttcaacagtagaacccgaaagaattacttggcttggtatcagcagaaaccagggcagtct 558
                                                                                                                                                                                                                                                                                                                                                                                 tccctggctgtgtcagcaggagagagaggtcgctatgagctgcaaatccagtcagagtctg 498
                                   ctggaaatcaaa 747
                                                                                        gcagtttattactgcaagcaatcttataatctaccg---acgttcggcggggggcaccaag 735
                                                                                                                                            GGCAGCGGGTCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTG
                                                                                                                                                             ggcagtggatctgggacagatttcactctcaccatcagcagtgtgcaggctgaagacctg
                                                                                                                                                                                                                  CCTAGGCTGCTCATTTACTGGGCATCTACCCGGGGAATCCGGGGTCCCTGACCGATTCAGT 195
                                                                                                                                                                                                                                                                                         TTGTACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGAAACCAGGACAGCCT 135
                                                                                                                                                                                                                                                                                                                                                              GTGGAGATCAMA
                                                                       GCAGTTTATTACTGTCAACAATATTATAGTACTCCGCTCACTTTCGGCGGAGGGACCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note-"Organ: head_neck; Vector: puc18; Site_1: SmaI; Site_2: SmaI, A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196.716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under low stringency conditions."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone_lib="HT0348"
/dev_stage="Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                   25.9%;
78.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 193.6; DB 8
Pred. No. 1.5e-46;
0; Mismatches 64
                                                                                                                                                                                                                                                                                                                                                                                                                                     64:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; 68
                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 459;
                                                                                                                                                                                                                                                                                                                                                                                                                                    ω,
                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                              678
                                                                                                                                            255
                                                                       315
```

۲,

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
   379.5
374
373
370
368.5
368.5
368.5
368.5
368.5
368.5
367.5
367.5
365.5
365.5
365.5
365.5
365.5
365.5
365.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               744.5
433.5
384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SPTREMBL_15:*
1: sp_archea:*
2: sp_bacteria
3: sp_fungi:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query
Match
       56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

56.6

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-297-181-4
1315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     374700 seqs, 117207915 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             February 12, 2001, 15:24:31; Search time 42.85 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QVKLQESGAELVRSGASVNL.....YCKQSYNLPTFGGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sp_archea:*
sp_bacteria:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sp_phage:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sp_human:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sp_organelle:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sp_mhc:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sp_mammal:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sp_invertebrate:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sp_virus:*
sp_vertebrate:*
sp_unclassified:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sp_plant:*
sp_rodent:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
       1117
1117
1114
108
108
109
109
119
119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BB
   1 Q9JYF0
1 Q9Z1G4
1 Q9Z1G4
1 Q9ZXE9
1 Q9UL81
1 Q9UL78
1 Q9UL78
1 Q9UL70
1 Q9JL77
1 Q9JL77
1 Q9JL77
1 Q9JL77
1 Q9JL81
1 Q9UL79
1 Q9UL81
1 Q9UL81
1 Q9UL81
1 Q9UL83
1 Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (without alignments)
681.092 Million cell updates/sec
                                                                                                                                                                                                                                       O9u181 homo
O9u192 homo
O9u178 homo
O9u174 mus
O9u170 homo
O9j177 mus
O9qxf0 mus
O9j181 mus
Q9u179 homo
Q9j175 mus
Q9u185 homo
Q9u183 homo
Q9u184 homo
Q9u194 homo
Q9u195 homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q9z1c4 mus
Q9qxe9 mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q9qyf0 mus
Q9jl85 mus
                                                                                                                                                                                                              homo
s musculu
s musculu
s musculu
s musculu
sapien
sapien
sapien
sapien
susculu
sapien
susculu
sapien
Ş
```

45	44	43	42	41	40	υ 9	38	37	36	ω 5	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20
282	284	285	285	286	288.5	296.5	296.5	300.5	300.5	301.5	302,5	305	305.5	306	306	309	309.5	311.5	313.5	331.5	334.5	334.5	338	342	347.5
21.4	21.6	21.7	21.7	•			٠	٠	٠	22.9		23.2	•	23.3	23:3	23.5	23.5	23.7	23.8	25.2	25.4	25.4	25.7	26.0	26.4
124	124	118	118	150	109	157	97	121	119	116	131	106	113	147	110	116	107	103	101	114	214	117	109	104	150
σ	σ	4	4	4	σ	4	11	4	4	4	4	Çī	4	4	11	4		11	11	4	11	11	4	11	4
Q9N0W4	Q9N0W6	Q9UL72	Q9UL91	095973	Q9N0W5	095978	Q9JL76	Q9UL71	Q9UL73	Q9UL93	Q9UL88	Q9U410	Q9UL90	Q9Y509	Q9JL83	Q9UL89	Q9JL84	Q9JL80	Q9JL78	Q9UL80	Q9R1A5	Q9Z1C6	Q9UL86	Q9JL82	Q9Y298
Q9n0w4 oryc	Q9n0w6 oryc	Q9u172 homo	Q9u191 homo	095973 homo	Q9n0w5 oryc	095978 homo	Q9j176 mus	Q9u171 homo	Q9u173 homo	Q9u193 homo	Q9ul88 homo	Q9u410 schi	Q9u190 homo	Q9y509 homo		Q9ul89 homo	Q9j184 mus	Q9j180 mus	Q9j178 mus	Q9ul80 homo	Q9rla5 mus	Q9z1c6 mus	Q9ul86 homo	Q9j182 mus	Q9y298 homo
oryctolagus	oryctolagus			sapien	oryctolagus	sapien					sapien	schistosoma		-		sapien	musculu		-	sapien			-		sapien

### ALIGNMENTS

61 APNFQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120

Š В

Ωy

밁

QY

<u>ب</u>

```
RESULT
Q9Z1C4
ID Q9Z
AC Q02
AC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 33.0
Best Local Similarity 70.9
Matches 83; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     09JL85;
01-0CT-2000 (TrEMBLrel. 15, Created)
01-0CT-2000 (TrEMBLrel. 15, Last sequence update)
01-0CT-2000 (TrEMBLrel. 15, Last annotation update)
01-0CT-2000 (TrEMBLrel. 15, Last annotation update)
ANTI-MYOSIN IMMUNOCLOBULIN HEAVY CHAIN VARIABLE REGION
Mus musculus (Mouse).
                  STRAIN-BALB/C;
Mueller J.P., Giannoni M.A., Hart
Matis L.M., Evans M.J.;
"Humanized porcine VCAM-specific
"Humanized porcine VCAM-specific
                                                                                                                                                                                                                                                      01-MAY-1999 (TIEMBLIEL 10, Created)
01-MAY-1999 (TIEMBLIEL 10, Last sequence update)
01-MAY-2000 (TIEMBLIEL 13, Last annotation update)
01-MAY-2000 (TIEMBLIEL 13, Last annotation update)
ANTI-PORCINE VCAM MAB 3F4 HEAVY CHAIN VARIABLE REGION
MUS musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NON_TER
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Malkiel S., Liao L., Cunningham M.W., Diamond B.; "Characterization of cross-reactive monoclonal anti-myosin/anti-n-acetyl-glucosamine antibodies from mice with autoimmune myocarditis."; submitted (NOV-1999) to the EMBL/GenBank/DDBJ databases.

EMBL: AF206021; AAF69319.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                   Q9Z1C4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa;
Mammalia; Eutheria;
  [gG2/G4-sconstant
                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                               NCBI_TaxID=10090;
                                                                                                                                                                                                         Mammalia; Eutheria;
                                                                                                                                                                                                                              Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN-BALB/C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q9JL85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEYAPNFQGKA 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TPSLKDKFIISRDNAKNTLYLQMSKVRSEDTALYYCARASYYGHSA----YWGQGTTVTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AELVKPGASVKLSCTASGFNIEDTYMHWVKQRPEQGLEWIGRIDPATGHSKYDPKFQGKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FGGGTKLEIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FGGGTKLEIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OKOGKSPOLLVYNAKTLADGVPSRFSGSGSGTQYSLKINSLQPEDFGSYYCQHFWTTPYT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QKPGQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLP-T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SSGGGGSGGGGGGGGDIELTQSPASLSASVGETVTITCRASGNI-----HNYLAWYQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SSGGGGSGGGGGGGDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQ 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 109
                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           249
  regions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            109
11944 MW;
                                                                                                                                                                                                         Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            33.0%;
  block human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 433.5; DB : Pred. No. 4.9e-31
                                                                            Hartman
                                                                                                                                                                                                         Craniata; Vertebrata; Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DFE615FE6CED4EDE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
monoclonal antibodies uman leukocyte binding
                                                                          S.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                   118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 109
                                                                                                                                                                                                                                                                                                                                                                                                                   3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 11;
                                                                            Elliott E.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                         Euteleostomi; Murinae; Mus
                                                                                                                                                                                                                                                                                      (FRAGMENT).
  to porcine
                             with chimeric
                                                                            Squinto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       109;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2
```

å

밁

Ş

```
RESULT OCCUPANT OF THE PROPERTY OF THE PROPERT
                                                              RESULT
Q9UL81
      B A E
                                                                                                                                              밁
                                                                                                                                                                                  Q
                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                               ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFT
                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                090XE9
090XE9;
01-MAY-2000
01-MAY-2000
01-JUN-2000
Q9UL81 PRELIMINARY;
Q9UL81;
01-MAY-2000 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PFAM; PFO
NON_TER
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NON_TER
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
Clemens A., Rademaekers A.,
Submitted (DEC-1997) to the
EMBL; AJ225174; CAB65237.1;
INTERPRO: IPRO03006; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus (Mouse)
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            endothelial celis.";
Submitted (NOV-1996) to t
EMBL; U78801; AAD00293.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ol-MAY-2000 (TrEMBLrel. 13, Created)
Ol-MAY-2000 (TrEMBLrel. 13, Last sequence update)
Ol-JUN-2000 (TrEMBLrel. 14, Last annotation update)
IMMUNOGLOBULIN HEAVY CHAIN V-D-J REGION (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INTERPRO; IPR003006; PFAM; PF00047; ig; 1.
                                                                                                                                            116
                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                            Н
                                                                                                                                                                                                                                                                                                                                                   Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Н
                                                                                 σı
                                                                                                                                                                                                                                                   APNFQGKATYTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                                                                                                                                                                                                                                                                                         SS
                                                                                                                                                                       - ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APNFQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY
                                                                                                                                                                                                                            NQKFKGKATLTVDKSSSTAYMQLNSLTSEDSAVYYCARDRY-----YAMDYWGQGTSVTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SS 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TQKFRGKATL PADKSSSTAYMQLSSLASEDSAVYYC --- ARRIVGGY - FDYWGQGTTLTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QVQVQQSGAELARPWASVKLSCKASGYNFNSYWMQWVKQRPGQGLEWIGAIYPGDGDTSY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PF00047;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             76;
                                                                                                                                                                                      122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          122
                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            117
117 i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                118 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              %
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ig; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13036 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .'
                                                                                                                                                                                                                                                                                                                                                                                                          28.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   to the EMBL/GenBank/DDBJ databases
    13,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   , WW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13;
                                                                                                                                                                                                                                                                                                                                                                                         17;
    Created
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Specht C., Koelsch EMBL/GenBank/DDBJ (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 384; DE
Pred. No. 1.2e
13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                          Score 379.5; DB
Pred. No. 3e-26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Craniata; Vertebrata; Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDDE2AF84D499734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                90EEC559D31EC4FC
                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                              107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 11;
.2e-26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ₽
                                                                                                                                                                                                                                                                                                                                                                                                                               DB 11;
                                                                                                                                                                                                                                                                                                                                                                                           27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CRC64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 118;
                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Euteleostomi;
; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                           Ç,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4;
                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
```

۳.

٨

٠,)

```
PRESULT
PRESUL
  밁
                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                            Query Match
Best Local S
Matches 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 69; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2000 (TrEMBLrel. 14, Last annotation update)
01-JUN-2000 (TrEMBLrel. 14, Last annotation variable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NON_TER
                                                                                                                                                                                                                                                                             Clin.
EMBL;
                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
MEDLINE-98277139; PubMed-9614934;
Van der Merwe P.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-MAY-2000 (TrembLrel. 13, Last sequel-01-OCT-2000 (TrembLrel. 15, Last annownees) MYOSIN-REACTIVE IMMUNOGLOBULIN LIGHT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q9UL92;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q9UL92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Ve
Mammalia; Eutheria; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; AF035033;
HSSP; P80362; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
MEDLINE-98277139; PubMed-9614934;
Wu X., Liu B., Van der Merwe P.L.,
                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                  NON_TER
                                                                                                                                                                                                                                         PFAM;
                                                                                                                                                                                                                                                          INTERPRO;
                                                                                                                                                                                                                                                                                                                      tetus.
                                                                                                                                                                                                                                                                                                                                                           coung
                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INTERPRO;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               fetus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gano
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'Myosin-reactive autoantibodies
                                                                                                                                                                                                                                                                                                                                       Myosin-reactive autoantibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          55
  ب
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLPTFGGGTKLEIK 249
                    QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QSGVPSRFSGSGSGTDFTLTISGLQAEDFATYYCQQSYSALTFGPGTKVDIR 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQQKPGQSPKVLIYWASTR 197
EVQLVESGAEVKKPGASVKVSCKASGYTFSSYXMHWVRQAPGQGLEMMGIINPSGGSTSY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DIQMTQSPSSLSASVGDRVTITCRASQSI-----SNYLNWYQQKPGKAPNLLIYAASSL
                                                                                                                                                                                                                                                                             Immunol. Immunopathol. 87:184-192(1998). AF035022; AAD56258.1; -.
                                                                                                                                                                                                                                                                                                                                                           Þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ö
                                                                                                                                                                                                                                     PF00047;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PF00047;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Immunol.
                                                                              Similarity 70; Conser
                                                                                                                                                                                                                                                          IPR003006;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IPR003006; -.
                                                                                                                                                                           124
124 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    107
107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1WTL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA;
                                                                                                                                                                                                                                   ig; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ig; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Immunopathol.
; AAD56269.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              107
11501 MW;
                                                                                                                                                                         124
13580 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28.4%;
                                                                                                   56
56
                                                                                               . 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13, Last sequence update)
15, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22;
                                                                            Score 373; DE
Pred. No. 1.26
l6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           87:184-192(1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Craniata; Vo
Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                           1BAAACBD96ACD2A2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  070549FDE0754748 CRC64;
                                                                                                                                                                                                                                                                                                                                       'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                άŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      374;
No. 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kalis N.N.,
                                                                                                                                                                                                                                                                                                                                     rheumatic
                                                                                                                                                                                                                                                                                                                                                                          Kalis N.N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rheumatic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Otation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CHAIN VARIABLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        124
                                                                            DB 4; 1
1.2e-25;
hes 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hominidae;
                                                                                                                                                                                                                                                                                                                                       carditis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  carditis
                                                                                                                                                                                                                                                                                                                                                                          Berney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Berney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 107;
                                                                                                               Length 124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REGION (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REGION (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                       and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and
                                                                                                                                                                                                                                                                                                                                                                            S.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ø
                                                                                                                                                                                                                                                                                                                                       normal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  normal
                                                                            2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6,
                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                     60
60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1;
```

```
RESULT ID UZZ A CONTROL OF CONTRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
Q9UL78
ID Q9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 62.9
Matches 71; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Clin. Immunol. I
EMBL; AF035036;
HSSP; P01789; 1M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q9UL78
Q9UL78;
01-MAY-2000
                                                                                                                                                                                                                                                                                                  Q9JL74 PRELIMINARY: PRT Q9JL74; Q9JL74; Q1-CCT-2000 (Trimblifel. 15, Creat Q1-CCT-2000 (Trimblifel. 15, Last Q1-CCT-2000 (Trimblifel. 15, Last ANTI-MYOSIN IMMJNOGLOBULIN LIGHT
                            EMBL; AF
                                                Submitted (NOV-1999) to the EMBL; AF206032; AAF69330.1;
                                                                       STRAIN-BALB/C;
Malkiel S., Liab L., Cunningham M.W., Diamond B.;
"Characterization of cross-reactive monoclonal anti-myosin/anti-n-
"Characterization of cross-reactive with autoimmune myocarditi
                                                                                        acetyl-glucosamine antibodies
                                                                                                                                                                                                                                         Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Young D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-0CT-2000 (TrEMBLrel. 15, Last annotation update)
MYOSIN-REACTIVE IMMUNOGLOBULIN LIGHT CHAIN VARIABLE
                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                     Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens (Human)
        NON_TER
                                                                                                                                                                                                                     NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PFAM; PF00047;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INTERPRO;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tetus."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=98277139; PubMed=9614934;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Myosin-reactive autoantibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                         œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGIPDRFSGSGSGTDFTLTISRLEPEDCAVYYCQQYGSSPLTFGGGTKVEIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APNFQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDG--YALDYWGQGTTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ESGYPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLP-TFGGGTKLEIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DIELTOSPSSLAVSAGEKVAMSCKSSOSLENSRTRKNYLAWYQQKPGQSPKVLIYWASTR 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TVSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TVSS
      AF206032;
ER 1
ER 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AQKFQGRVTMTRDTSTSTVYMELSSLRSEDTAVYYCARGLYVVVPAAFSRFDYWGQGTLV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Liu B., Van
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           , ig; 1.
1
109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IPR003006; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ) (TrEMBLrel. 13, 0) (TrEMBLrel. 13, 0) (TrEMBLrel. 15, 0)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      109 AA; 11646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Immunopathol.
; AAD56272.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           der Merwe
                                                                                                                                                                                                                                           Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22;
                                                                                                                                                                                                                                                                                                                                                                       Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 370;
Pred. No. :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       87:184-192(1998)
                                                                                                                                                                                                                                      Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5F675C52EC7EE197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               in
                                                                                                                                                                                                                                                                                                     sequence update)
annotation update)
CHAIN VARIABLE REG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kalis N.N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rheumatic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          109
                                                                                                                                                                                                                                                                                                                                                                                                                 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 4;
.9e-25;
                                                                                                                                                                                                                                                                                                                                                                                                                 ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 carditis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Berney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CRC64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 109
                                                                                                                                                                                                                                                                                                         REGION (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REGION (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ß
                                                                                        myocarditis.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 normal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2
```

```
ğ
                                                                                                                                                                                                           8
                                                                                                                                                                                                                             δ.
                                                                                                                                                                                                                                                                                                  RESULT
Q9UL70
                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SS
                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 72
                                                     Q9JL77;
01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-OCT-2000 (TrEMBLrel. 15, Last annotation updat
ANTI-MYOSIN IMMUNOGLOBULIN HEAVY CHAIN VARIABLE F
                                                                                                                                                                                                                                                                                                          NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   090L/0;
01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-OCT-2000 (TrEMBLrel. 15, Last annotation update)
01-OCT-2000 (TrEMBLrel. 15, Last annotation variable
                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
MEDLINE-98277139; PubMed-9614934;
Wu X., Liu B., Van der Merwe P.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                     Q9JL77
                                                                                                                                                                                                                                                                                                                                                  EMBL; AF035044; AAD56280.1; HSSP; P01607; 1REI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa;
Mammalia; Eutheria;
           SEQUENCE FROM
                            NGBI_TaxID=10090;
                                       Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q9UL70;
                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                        INTERPRO;
                                                                                                                                                                                                                                                                                                                                                                              fetus.
                                                                                                                                                                                                                                                                                                                                                                                                  Young D.C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=9606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q9UL70
                                                                                                                                                                                                                                                                                                                                                                                       Myosin-reactive autoantibodies
                                                                                                                                                                                        198
                                                                                                                                                                                                                              138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 148 LAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQQKPGQSPKVLIYWASTRESGVPDRFTG 207
                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         57
                                                                                                                                        10
                                                                                                                                                                                                          Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            φ
                                                                                                                                                                   SGSGTDFTLTISSVQAEDLAVYYCKQSYNLP-TFGGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LIVSAGDRYTITCKASQSVSND-----VAWYQQKPGQSPKLLIYYASNRYTGVPDRFTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SGYGTDFTFTISTVQAEDLAVYFCQQDYSSPRTFGGGTKLEIK 99
                                                                                                                                                                                                                                                                                                                              PF00047; ig; 1.
                                                                                                                                                                                                                                                                                                                                                                      Immunol. Immunopathol.
                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                        IPR003006; -.
                                                                                                                                                                                                                                                                                             1
108
108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
           N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA;
                                                                                                                                                                                                                                                                                                  AA;
                                                                                                                                                                                                                                                                                                           108
                                       Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10939
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chordata: Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                  11633 MW;
                                                                                                                                                                                                                                                           28.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     , WM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14;
                                                                                                                                                                                                                                                 18;
                                                                                                                                                                                                                                                           Score 368.5;
Pred. No. 2.
                                                                                                                                                                                                                                                                                                                                                                      87:184-192(1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 368.5; DB 1
Pred. No. 2.3e-25;
                                       Sciurognathi;
                                                 Craniata; Vertebrata; Euteleostomi;
                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3B25D0E784533324 CRC64;
                                                                                                                                                                                                                                                                                                  B7BEDC3E41FCCA37 CRC64;
                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                       in rheumatic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                           Kalis N.N.,
                                                                                                                     110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         108
                                                                                                                     B
                                                                                                                                                                                                                                                            .5e-25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₿
                                                                                                                                                                                                                                                                     DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 11;
                                        Muridae; Murinae; Mus
                                                                              update)
                                                                                                                                                                                                                                                    16;
                                                                                                                                                                                                                                                                                                                                                                                        carditis and normal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10,
                                                                                                                                                                                                                                                                                                                                                                                                           Berney
                                                                    REGION
                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REGION (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                            S.M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99;
                                                                                                                                                                                                                                                 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7;
                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               56
                                                                                                                                                                                                                                                 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2
```

```
AC Q9JL81
DT Q
DT 0
DT 0
DT 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
Q9QXF0
ID Q9
                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SQ FTT DR RT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                  RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                     Q9JL81;
Q9JL81;
01-OCT-2000
01-OCT-2000
01-OCT-2000
ANTI-MYOSIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NON_TER
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q9QXF0 PRELIMINARY; PRT; 117 AA. 09QXF0, 01-MAY-2000 (TIEMBLIEL 13, Created) 01-MAY-2000 (TIEMBLIEL 13, Last sequence update) 01-JUN-2000 (TIEMBLIEL 14, Last annotation update) 11-JUN-2000 (TIEMBLIEL 14, Last a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NON_TER
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Malkiel S., Liao L., Cunningham M.W., Diamond B.;

"Characterization of cross-reactive monoclonal anti-myosin/anti-n-
acetyl-glucosamine antibodies from mice with autoimmune myocarditis.";
Submitted (NOV-1999) to the EMBL/GenBank/DDBJ databases.

EMBL; AF206029; AAF69327.1; -.
  Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Clemens A., Rademaekers A., Submitted (DEC-1997) to the EMBL; AJ225171; CAB65236.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ביייים איטנים, Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; NCBI_TaxID+10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PFAM; PF00047; ig; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                       116
                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11 LVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEYAPNFQGKATV
                                                                                                                                                                                                                                                                                                                                                                                                                                         \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               71 TADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTVSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    μ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    끄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ω
  musculus
                                                                                                                                                                                                                                                                                                    SS 122
                                                                                                                                                                                                                                                                                                                                              NQKFKGKATLTVDKSSSTAYMQLNSLTSEDSAVYYC----ARDKDYYFDYWGQGTTLTV
                                                                                                                                                                                                                                                                                                                                                                                            APNFQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY
                                                                                                                                                                                                                                                       SS 117
                                                                                                                                                                                                                                                                                                                                                                                                                                           EVQLQQSGPELVKPGASVKMSCKASGYTFTDYYMKWVKQSHGKSLEWIGDINPNNGGTSY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TVDTSSSTAYVDLSSLTSEDSAVYYCAR----QRRNYAMDYWGQGTSVTVSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LVRPGASVKLSCKASGYTFTSSWMHWAKQRPGQGLEWIGEIHPNSGHTNYNEKFKGKATL
                                                                                                                                                                                           Ļ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1
117
117 FA;
                       O (TrEMBLIEL. 15,
O (TrEMBLIEL. 15,
O (TrEMBLIEL. 15,
N IMMUNOGLOBULIN H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      110 AA;
                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rademaekers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                110.
  (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12138 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27.9%;
58.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MW;
                       , Last sequence update)
, Last annotation update)
HEAVY CHAIN. VARIABLE REGION (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11;
                                                                                          Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Specht C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 367.5;
Pred. No. 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 368; DB 11;
Pred. No. 2.9e-25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   D816AD0858A47E4C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2EDE81FB5862C9AF CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                         114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Koelsch E.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .4e-2
                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CRC64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 110;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Euteleostom1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                           60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ۳.
```

1

```
Q9UL77
                                                                                            밁
                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SQ FT REFT REAL REPT REAL REAL REPT REAL REAL REPT REAL REPT REAL REPT REAL REPT REAL REPT REAL REPT REAL REAL REPT REAL REAL REPT REAL REPT REAL REPT REAL REPT REAL REPT REAL REPT REAL REAL REPT REAL REPT REAL REPT REAL REPT REAL REPT REAL REPT REAL REAL REPT REAL REAL REPT 
                                           δõ
                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
  밁
                                                                                                                                                                                    Query Match
Best Local S
Matches 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 69; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Malkiel S., Liao L., Cunningham M.W., Diamond B.;

"Characterization of cross-reactive monoclonal anti-myosin/anti-n-
acetyl-glucosamine antibodies from mice with autoimmune myocarditis.";
Submitted (NOV-1999) to the EMBL/GenBank/DDBJ databases.

EMBL; AF206025; AAF69323.1; ...
                                                                                                                                                                                                                                                                                                                            NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-98277139; PubMed-9614934; Security Processing From Van der Merwe P.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-OCT-2000 (TrEMBLrel. 15, Last annotation update)
MYOSIN-REACTIVE IMMUNOGLOBULIN LIGHT CHAIN VARIABLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q9UL77;
01-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q9UL77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
STRAIN=BALB/C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=10090;
[1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                              INTERPRO;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Myosin-reactive
                                              198
                                                                                                                                          138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10
  55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13
                                                                                          μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ν
                                                                                                                    DIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQQKPGQSPKVLIYWASTR 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LTVDKSSSTAYMQLSSPTSEDSAVYYCARSNYYGSSLYYFDYWGQGTTLTVSS 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEYAPNFQGKAT
QSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQSYSTSWTFGEGTKVEIK 107
                          ESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLP-TFGGGTKLEIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTVSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QLVRPGASVKISCKASGYSFTSYWMHWVKQRPGQGLEWIGMIDPSDSETRLNQKFKDKAT
                                                                                       DIQMTQSPSSLSASVGDRVTITCRASQSI-----SSYLNWYQQKPGKAPNLLIYAASSL
                                                                                                                                                                                                                                                                                                                                                                                                                 Immunol. Immunopathol. AF035037; AAD56273.1; -P01607; 1REI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ū
                                                                                                                                                                                                                                                                                                                                                                        PF00047;
                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                IPR003006; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 114 AA;
                                                                                                                                                                                                                                                                                                      108 AA;
                                                                                                                                                                                                                                                                                                                               108
                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                        ig; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                autoantibodies
                                                                                                                                                                                                                                                                                                 108
11738 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chordata; Craniata; Vertebrata; Euteleostomi; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12829
                                                                                                                                                                                                          27.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13,
13,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12;
                                                                                                                                                                                      21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 367; DB 11;
Pred. No. 3.7e-25;
                                                                                                                                                                                 Score 365.5; DB 4;
Pred. No. 4.6e-25;
l; Mismatches 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  87:184-192(1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Craniata; V Catarrhini;
                                                                                                                                                                                                                                                                                                      C06681716C4D16F3 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 404885FDE6BA56F8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rheumatic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kalis N.N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CHAIN VARIABLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Vertebrata; Euteleostomi;
l; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Berney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 114;
                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REGION (FRAGMENT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S.M.,
                                                                                                                                                                                                                                  108;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             122
                                                                                                                                                                                    7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   69
                                                                                          54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

RESULT Q9UL79

14

δÃ

밁

-

```
RESULT
                                                                                         Дb
                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                           Q9JL75
Q9JL75;
Q1-OCT-2000
01-OCT-2000
01-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NON_TER
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q9UL79;
Q9UL79;
01-MAY-2000
                                                                                                                        Malkiel S., Liap L., Cunningham M.W., Diamond B.; "Characterization of cross-reactive monoclonal anti-myosin/anti-n-acetyl-glucosamine antibodies from mice with autoimmune myocarditi. Submitted (NOV-1999) to the EMBL/GenBank/DDBJ databases.
EMBL, AF206031; AAF69329.1; -
                                                                                                                                                                                                                                                               01-0CT-2000 (TrEMBLrel. 15, Created)
01-0CT-2000 (TrEMBLrel. 15, Last sequence update)
01-0CT-2000 (TrEMBLrel. 15, Last annotation update)
ANTI-MYOSIN IMMUNOGLOBULIN HEAVY CHAIN VARIABLE REGION (FRAGMENT)
                                                                                                                                                                                                                   Eukaryota; Metazoa; Mammalia; Eutheria; NCBI_TaxID=10090;
                                                                                                                                                                                                                                                      Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; AF035035; AAI
HSSP; P01607; 1REI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MYOSIN-REACTIVE IMMUNOGLOBULIN LIGHT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-OCT-2000
                                                                                                                                                                                   STRAIN-BALB/C;
                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Wu X., Liu B., Van
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=9606;
                                                                                         SEQUENCE
                                                                                                                NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PFAM; PF00047;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Myosin-reactive autoantibodies in rheumatic carditis and normal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=98277139; PubMed=9614934;
                                                                                                     NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (NTERPRO;
                                                                                                                                                                                                                                                                                                                                                                                                          198
                                                                                                                                                                                                                                                                                                                                                                                                                                                        138
          10
                                                                                                                                                                                                                                                                                                                                                                                    55
                                                                                                                                                                                                                                                                                                                                                                                                                                \boldsymbol{\mu}
                                                                                                                                                                                                                                                                                                                                                                                                ESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNL-PTFGGGTKLEIK
                                                                                                                                                                                                                                                                                                                                                                                                                                 DIVMTQSPSLLSASTGDRVTISCRMSQGI-----SSYLAWYQQKPGKAPELLIYAASTL 54
                                                                                                                                                                                                                                                                                                                                                                                                                                             DIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQQKPGQSPKVLIYWASTR 197
ELVRSGASVNLSCTASGENIKDYYMHWVKQRPEEGLEWIGYIDPESGETEYAPNEQGKAT
                                                                                                                                                                                                                                                                                                                                                                                   QSGVPSRFSGSGSGTDFTLTISCLQSEDFATYYCQQYYSFPPTFGQGTKVEIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0.0
                                 70;
                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IPR003006; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        108 AA;
                                                                                         109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 108
                                                                                                     109 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (TrEMBLrel. 13, (TrEMBLrel. 13, (TrEMBLrel. 15,
                                 Conservative
                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ig;
                                                                                         Å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Immunopathol.
AAD56271.1;
                                                                                         109
12118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   der
                                                                                                                                                                                                                               Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11787
                                          27.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Merwe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MW;
                                                                                         ₩,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19;
                                 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 363.5; DE
Pred. No. 7e-25;
9; Mismatches
                                Score 359; DB 11;
Pred. No. 1.8e-24;
6; Mismatches 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      87:184-192(1998).
                                                                                                                                                                                                                              Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB5845F19724FB4E
                                                                                         FF65E441BBF936A6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kalis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CHAIN VARIABLE
                                                                                                                                                                                                                                                                                                                           109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N.N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                           ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17;
                                 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Berney
                                                                                         CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CRC64;
                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REGION (FRAGMENT).
                                                        109;
                                                                                                                                                 myocarditis.";
                                                                                                                                                                                                                                                                                                                                                                                    107
                                                                                                                                                                                                                                                                                                                                                                                                         249
                                 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7;
                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
          69
                                 w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2
```

Search Job ti	Qy .
Search completed: February 12, 2001, 15:24:31 Job time: 101 sec	70 VTADTS:   :      61 LTSDKS
: February	SNTAYLHLSSI  :   :      SSTAYMELSSI
12,	TSED
2001,	TTVYY :     SAVYY
15:24:31	CNAVIYY         CARDGN
	EYDGY    : -YRGF
	70 VTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGOGTTVTVSS 122 
	122

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            on:
              Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
           854.5
841.5
841.5
841.5
841.5
841.5
833.5
833.5
833.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
803.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PIR_66:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query
Match
           BLOSUM62
Gapop 10.0 , Gapext 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-297-181-4
1315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       195891 seqs, 67900655 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            February 12, 2001, 15:25:01;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QVKLQESGAELVRSGASVNL.....YCKQSYNLPTFGGGTKLEIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
           DB
        341344

3413403

543103

543103

57040265

5706023

5706023

5706023

5706023

5706023

5706023

5706023

5706023

5706023

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

570602

57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Search time 26.51 Seconds (without alignments) 637.769 Million cell updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Million cell updates/sec
Ig heavy chain V r single chain Fv an p53 specific singl Ig kappa chain V r Ig light chain V r Ig kappa chain V r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Description
```

45	44	43	42	41	40	39	38	37	36	35 5	34	33	32	31	30
463.5	464	465	466	467	467.5	467.5	468	468.5	468.5	469	470.5	474.5	474.5	475	477.5
35.2	35.3	35.4	35.4	35.5	35.6	35.6	35.6	35.5	35.6	35.7	35.8	36.1	. 36 . 1.	36.1	36.3
113	133	97	112	221	118	113	116	112	112	122	240	120	113	138	214
N	ᆫ	N	N	Ν	N	Ŋ	N	N	N	N	N	N	N	N	N
S30520	K4HUJI	A42575	S09970	S49220	S25174	JC2270	S15672	F30538	E30538	S06823	S06084	S03471	PL0264	S26040	S68212
Ig kappa	Ig kappa	Ig kappa	Ig kappa	Ig gamma-	Ig heavy	PL7-6 ant	Ig heavy	Ig kappa	Ig kappa	Ig heavy	Ig kappa	Ig heavy			
chain	chain	chain '	chain	1 chai	chain	tibody	chain	chain	chain	chain	chain		chain	chain	chain
٧	pre	٧	۲-۷	;	٧ ٢	119	٧	۲	٧	٧r	pre	V-D	٧r	pre	(Ma

## ALIGNMENTS

·			
Qy 240 FGGG	Qy 61 A Db 63 D Qy 121 S Db 119 S Qy 181 Q Db 172 Q	Query Match Best Local Matches 16  Qy 1 QVK	RESULT 1 A56446 Ig heavy chain V reg C; Species: Mus muscu C; Date: 19-Jan-1996 C; Accession: A56446 R; Tanny, P.M.; Foltz, J. Biol. Chem. 270; A; Title: A high affi A; Reference number: A; Accession: A56446 A; Status: preliminar A; Molecule type: mRN A; Residues: 1-268 < T A; Cross-references: C; Keywords: heterote
Qy 240 FGGGTKLEIK 249	APNFQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120          :	Query Match Best Local Similarity 65.2%; Score 857; DB 2; Length 268; Best Local Similarity 66.8%; Pred. No. 3.1e-54; Matches 167; Conservative 26; Mismatches 45; Indels 12; Gaps 3;  1 OVKLOESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY 60	RESULT 1  A56446  A56446  If heavy chain V region (3H-3H scFv) - mouse (strain BALB/C)  C;Species: Mus musculus (house mouse)  C;Date: 19-Jan-1996 #sequence_revision 19-Jan-1996 #text_change 16-Aug-1996  C;Accession: A56446  R;Tang, P.M.; Foltz, L.A.; Mahoney, W.C.; Schueler, P.A.  J. Biol. Chem. 270; 7829-7835, 1995  A;Pitle: A high affinity digoxin-binding protein displayed on M13 is functionally A;Reference number: A56446; MUID:95229583  A;Accession: A56446  A;Status: preliminary  A;Molecule type: mRNA  A;Molecule type: mRNA  A;Residues: 1-268 cyTAN>  A;Cross-references: 3B:U20617  C;Reywords: heterotetramer; immunoglobulin
anti			ide

```
A; Reference number: S413
A; Accession: S41374
A; Status: preliminary
A; Molecule type: DNA
A; Residues: 1-249 < ART>
                          Ş
                                                                                        Qγ
                                                                                                                           В
                                                                                                                                                        δÃ
멍
                                                             В
                                                                                                                                                                                           멍
                                                                                                                                                                                                                        ş
                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                  A; Experimental source: hydricloma cell C; Comment: This protein specifically b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R; Jannot, C.B.; Hynes, N.E.
Biochem. Biophys. Res. Commun. 230, 242-246, 1997
A;Title: Characterization of scfv-421, a single-chain
A;Reference number: JC5322; MUID:97168950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C:Species: Homo sapiens (man)
C:Date: 15-May-1997 #sequence_revision 15-May-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: mRNA
A; Residues: 1-233 <JAN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C; Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Accession: JC5322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Cross-references: EMBL: Z29480
                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 65.0
Best Local Similarity 68.3
Matches 172; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                specific single-chain antibody Pab421 -
                                                               170
                               245 KLEI 248
                                                                                             185
                                                                                                                             112
                                                                                                                                                             125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            119
 230 KLEI
                                                                                                                                                                                                                           65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                           61 GVKATMTADTSSNTAYLQLSSLTSEDTAVYYCNA-----GMDYWGQGTTVTVSSGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 VPRFQDKATITADTSSNTAYLLLSSLTSEDTAVYYCARRDTLY-----TSLGYWGQGSTV 115
                                                                                                                                                                                                                                                         Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>_</u>
                                                                                                                                                                                                                                                                                         IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>بــ</u>
                                                                              QSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLPTFGGGT 244
                                                                                                                                            GGSGGGGSGGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQQKPG
                                                                                                                                                                                                             QGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTVSSGG
                                                                                                                                                                                                                                                                          QESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEYAPNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                YQQKPGQSPKVLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLP 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TVSSGGGGSGGGGSGGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAW 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APNEQGKATVTADTSSNTAYLHLSSLTSEDTTVYYC--NAVIYYEYDGYALDYWGQGTTV 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY
                                                               QPPRLLIYLVSNLESGVPARFSGSGSGTDFTLNIHPVEEEDAATYYCQHIRELTRSEGGT
                                                                                                                             GGSGGRASGGGGSDIELTQSPASLAVSLGQRATISCRASKSV--STSGYSYMHWNQQKPG
                                                                                                                                                                                                                                                           QESGAELVRSGASVKLSCTTSGFNINDYYMHWVKKRPEQGLEWIGRIDPENGDADMTRSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -TFGGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TVSSRGGGSGGGGGGGGDIELTQSPPSVVVIPGESVSISCRSSKSLLYS-DGDSYLFW 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QVQLQQSGAELVRPGASVKLSCTASGFNFKDDYIHWVKQRPEKGLEWIARIAPASGNVKY 60
                                                                                                                                                                                                                                                                                                                         165;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LTFGAGTKLELK 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FLQRPGQSPQLLIYRMSNLASGVPDRFSGSGSGTSFTLRISRVEAEDVGVYYCMQHREYP
                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JC5322
                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S41374
                                                                                                                                                                                                                                                                                                                                                                                                      specifically binds the
                                                                                                                                                                                                                                                                                                                                        64.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       65.0%; Score 854.5; 68.3%; Pred. No. 4.
                                                                                                                                                                                                                                                                                                                         24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23;
                                                                                                                                                                                                                                                                                                                                      Score 841.5; DB 2
Pred. No. 3.4e-53;
                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5; DB 2;
1.3e-54;
                                                                                                                                                                                                                                                                                                                                                                                                    tumor suppressor protein p53.
                                                                                                                                                                                                                                                                                                                       44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         48;
                                                                                                                                                                                                                                                                                                                                                     ຸນ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    antibody
                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       249;
                                                                                                                                                                                                                                                                                                                       11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    targeted to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18-Jul-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9;
                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                             229
                                                                                                                             169
                                                                                                                                                           184
                                                                                                                                                                                           111
                                                                                                                                                                                                                           124
                                                                                                                                                                                                                                                           60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                      끉
                                                                                                                                                                                                                                                                                                                       2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4;
                                                                                                                                                                                                                                                                                                                                                                                                      restores
```

```
Ig kappa chain V.region (anti-DNA, DP13VK and DP18VK) - mouse (fragment) C:Species: Mus musculus (house mouse) C:Date: 16-Sep-1992 #sequence_revision 16-Sep-1992 #text_change 21-Jan-2000 C:Accession: PL0265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ig light chain V region (S107/VH11 group 1-4) - mouse (fragment)
C;Species: Mus musculus (house mouse)
C;Date: 30-Sep-1993 *sequence_revision 30-Sep-1993 *text_change 21-Jan-2000
C;Accession: PT0407
R;Behar, S.M.; Lustgarten, D.L.; Corbet, S.; Scharff, M.D.
J. Exp. Med. 173, 731-741, 1991
A;Title: Characterization of sommatically mutated S107 VH11-encoded anti-DNA
A;Reference number: FT0376; MUID:91147903
A;Accession: PT0407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PT0407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Cross-references: EMBL:Z31353; NID:g467574; PIDN:CAA83231.1; PID:C;Superfamily: immunoglobulin V region; immunoglobulin homology C;Keywords: heterotetramer; immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C;Accession: S43103
R;Gilbert, D.; Brard, F.; Margaritte, C.; Delpech, A.; Tron, F.
submitted to the EMBI. Data Library, March 1994
A;Description: An id:otype D23-bearing polyspecific, murine anti-DNA monoclonal antib
A;Reference number: S42484
A;Accession: S43103
                                                                                                                                RESULT
                                                                                                                                                                                              밁
                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        F;16-96/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;MoLecule type: DNA
A;Residues: 1-113 <BEH>
C;Superfamily: immunoglobulin V region; immunoglobulin
C;Keywords: immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: mRNA
A; Residues: 1-112 <GIL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ig kappa chain V-J region (4B1 VL) - mouse (fragment)
C;Species: Mus musculus (house mouse)
C;Date: 06-Feb-1995 #sequence_revision 06-Feb-1995 #text_change
  R; Shlomchik, M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       F;16-96/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 105
                                                                                                                                                                                                                                                                           198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          138
                                                                                                                                                                                                                                        198
                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              62
                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 DIVMSQSPSSLAVSAGEKVTMSCKSSQSLLNSRTRKNYLAWYQQKPGQSPKLLIYWASTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  G
                                                                                                                                σ
                                                                                                                                                                                            ECGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLYTFGGGTKLEIK 112
                                                                                                                                                                                                                  ESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLPTFGGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLPTFGGGTKLEIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQQKPGQSPKVLIYWASTR 197
                                                                                                                                                                                                                                                                                                                                                                    104;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLRTFGGGTKLEIK 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    105;
  Mascelli,
                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                      40.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41.4%;
  Shan,
                                                                                                                                                                                                                                                                                                                                                                  Score 538; DB 2;
Pred. No. 6.2e-32;
3; Mismatches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 544; DB 2;
Pred. No. 2.3e-32;
3; Mismatches 4
  Η.;
  Radic,
  M.Z.;
                                                                                                                                                                                                                                                                                                                                                                                                          Length 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 112
Pisetsky,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                    Indels
  D.; Marshak-Rothstein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21-Jan-2000
                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          :9467575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            anti-DNA autoantib
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

```
R;Marget, M.; Eckhardt, A.; Ehret, W.; von Specht, B.U.; Duchene, M.; Domdey, Gene 74, 335-345, 1988
A;Title: Cloning and characterization of cDNAs coding for the heavy and light A;Reference number: PS0023; MUID:89232725
Ig light chain V region ($107/VH11 group 1-6) - mouse (fragment) C;Species: Mus musculus (house mouse) C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change C;Accession: PT0408
                                                                                            RESULT
PT0408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Note: the amino-terminal four residues of the mature protein were directly sequenced C;Comment: This chain was obtained from a monoclonal antibody against Pseudomonas aerug C;Superfamily: immunoglobulin v region; immunoglobulin homology C;Keywords: heterotetramer; immunoglobulin homology C;Keywords: heterotetramer; immunoglobulin fr;1-20/Domain: signal sequence #status predicted <SIG>F;1-20/Domain: signal sequence #status predicted <SIG>F;21-133/Product: Ig kappa chain V region 6A4 #status experimental <IGV>F;36-116/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ig kappa chain precursor V region (6A4) - C;Species: Mus musculus (house mouse) C;Date: 07-Jun-1990 #sequence_revision 07-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 F;16-96/Domain: immunoglobulin homology <IMM>F;24-40/Region: complementarity-determining 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        J. Exp. Med. 171, 265-297, 19
A; Title: Anti-DNA antibodies
                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Accession: PS0023
A; Molecule type: mRNA
A; Residues: 1-133 <MAR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              F;56-62/Region: complementarity-determining
F;63-94/Region: framework 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              F;41-55/Region: framework
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              F;1-23/Region: framework
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C; Keywords:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Residues:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Accession: PL0265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Reference number:
                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C; Accession: PS0023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    F;103-112/Region: framework 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         F;95-102/Region: complementarity-determining
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Experimental source: strain BALB/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Superfamily: immunoglobulin V region; immunoglobulin; Keywords: heterotetramer; immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                            194 ASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLPTFGGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       138 DIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQQKPGQSPKVLIYWASTR 197
                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                      77
                                                                                                                                                                                                                                                                            17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            μ
                                                                                                                                                                                                                                                                                                                       GGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQQKPGQSPKVLIYW 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DIVMSQSPSSLAVSAGEKVTMSCKSSQSLENSRTRKNYLAWYQQKPGQSPKLLIYWASTR 60
                                                                                                                                                                                                                                                                         GTCGDIVMSQSPSSLAVSAGEKVTMSCKSSQSLLNSITRKNFLAWYQQKPGQSPKLLIYW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYYLLTFGAGTKLELK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLPTFGGGTKLEIK 249
                                                                                                                                                                                  1-112 <SHL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  265-297, 1990
                          #sequence_revision 30-Sep-1993 #text_change 21-Jan-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PL0231;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         40.5%;
                                                                                                                                                                                                                                                                                                                                                                                         40.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     s from autoimmune mice arise by clonal expansion and \ensuremath{\mathtt{MUID}}\xspace:90111618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4.
                                                                                                                                                                                                                                                                                                                                                                                         Score 533; DB 2;
Pred. No. 1.7e-31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 533; DB 2;
Pred. No. 1.4e-31;
                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     07-Jun-1990 #text_change 21-Jan-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mouse
                                                                                                                                                                                                                                                                                                                                                                      œ
                                                                                                                                                                                                                                                                                                                                                                                                              Length 133;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 112;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           homology
                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             heavy and light chains of
                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                            76
                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           somatic
                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20
```

```
Ig kappa chain V region (6188) - mouse (fragment) C.Species: Mus musculus (house mouse) C.Date: 30-Sep-1991 #sequence_revision 30-Sep-1991 C.Accession: $03304; JL0043 R. Van Cleave, V.H.; Naeve, C.W.; Metzger, D.W. J. Exp. Med. 167 1841-1848, 1988 A. Title: Do antibodies recognize amino acid side cha. R. Reference number: JL0043; MUID:88258372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
S41393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R;Behar, S.M.; Lu
J. Exp. Med. 173,
A;Title: Characte
A;Molecule type: mRNA
A;Residues: 1-111 </NAP
A;Cross-references: EMBL:X12380; NID:952341;
A;Note: the authors translated the codon GAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Cross-references: EMBL:229536
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;16-96/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-112 <MAR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Reference number: $41393
A; Accession: $41393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R; Margaritte, C.; Gilbert, D.; Bransubmitted to the EMBL Data Library,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C;Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ig kappa chain V region (12.5H VL) - mouse C; Species: Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C;Superfamily: immunoglobulin V region; immunoglobulin C;Keywords: immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: DNA
A; Residues: 1-113 <BEH>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Reference number: PT0376; MUID: 91147903 A; Accession: PT0408
                                                                            A; Accession: S03304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Description:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C; Accession: S41393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 F;16-96/Domain: immunoglobulin
                                                                                                                                                                                                                                                                         RESULT
                                                                                                                                                                                                                                                   S03304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              138
                                                                                                                                                                                                                                                                                                                                                                   198 ESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLPTFGGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  198
                                                                                                                                                                                                                                                                         10
                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 DIVMSQSPSSLAVSVGEKVTMSCKSSQSLLYSSNQKNYLAWYQQKPGQSPKLLIYWASTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S.M.; Lustgarten, D.L.; Corbet, Med. 173, 731-741, 1991
Characterization of somatically
                                                                                                                                                                                                                                                                                                                                 DSGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLRTFGGGTKLEIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLPTFGGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                               DIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQQKPGQSPKVLIYWASTR 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ECGYPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLYTFGGXTXLEXK 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  101;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Structural characterization of an (NZB x NZW)F1 mouse-derived IgM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        39.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    39.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     somatically mutated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Brard, F.; Tron,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>ن</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ψ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 514; DB 2; Pred. No. 3.1e-30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 520; DB 2;
Pred. No. 1.2e-30;
3; Mismatches 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               January
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AMI?
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          s.;
PIDN:CAA30938.1; for residue 76 as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scharff,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'T]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S107
                                                                                                                  chains
                                                                                                                                                                                            #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 112;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 113;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VH11-encoded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              м.
D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                of
                                                                                                                protein antigens
    as
                  PID:g930189
                                                                                                                                                                                                                                                                                                                                 112
                                                                                                                                                                                            21-Jan-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       anti-DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                  independe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     autoantib
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               anti
```

```
Ig heavy chain precursor V region (MRL-histone /H) - mouse (Iragmeur,)
C:Species: Mus musculus (house mouse)
C:Date: 04-Dec-1992 #sequence_revision 04-Dec-1992 #text_change 21-Jan-2000
C:Accession: S04576
C:Riccession: S04576
A:Riccession: S04576
A:Reference number: S04573; MUID:87133856
A:Reference number: S04573; MUID:87133856
A:Residues: 1-136 < KOF>
A:Residues: 1-136 < KOF>
A:Residues: 1-136 < KOF>
A:Residues: signal sequence #status predicted <MAT>
F:20-136/Product: Ig heavy chain V region; Immunoglobulin homology
F:20-136/Product: Ig heavy chain V region (fragment) #status predicted <MAT>
F:34-117/Domain: immunoglobulin homology <IMM>
                                                                                    Ig light chain V region (clone 111.19) - mouse C; Species: Mus musculus (house mouse) C; Dete: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change C; Accession: PHI101 R; Tillman, D.M.; Jou, N.T.; Hill, R.J.; Marion, T.N. J. Exp. Med. 176, 761-779, 1992 A; Title: Both IgM and IgG anti-DWA antibodies are the products on A; Reference number: PH0971; MUID:92381444 A; Accession: PH1101 A; Status: nucleic acid sequence not shown A; McJecule type: mRNA A; Residues: 1-104 <TIL> A; Reference type: mRNA A; Residues: 1-104 <TIL
A; Experimental source: B cell, strain [1 C; Superfamily: immunoglobulin V region; C; Keywords immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
PH1101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C;Superfamily: immunoglobulin V region; immunoglobulin
C;Keywords: heterotetramer; immunoglobulin
F;16-96/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 198 ESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLP-TFGGGTKLE 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           138 DIELTQSPSSLAVSAGEKVAMSCKSSQSLENSRTRKNYLAWYQQKPGQSPKVLIYWASTR 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 DIVTSQSPSSLAVSAGEKVTLTCKSSQILLNSRTRKNYLAWYQQKPGQSPKLLIYWASTR 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SS 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APNFQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EVQLQQSGAELVRPGASVKLSCTASGFNIKDDYMHWVKQRPEQGLEWIGWIDPENGDTQY 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSNNLPFTFGSGTKLE 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ASKFQGKATMTADTSSNTTYLQLSSLTSEDTAVYYCTT-----YGAYAMDYWGQGTSVTV 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             38.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          38.3%;
                                                               strain [NZB x NZW]Fl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 501.5; DB 2; Pred. No. 3e-29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 503.5; DB:
Pred. No. 1.7e-29
4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                               immunoglobulin homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ري
ز
                                                                                                                                                                                                                                                                        products of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1;
                                                                                                                                                                                                                                                                    clonally selective
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ۳
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          involvem
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      F.J.; Th
                                                                                                                                                                                                                                                                        w
                                                                                                                                                                                                                                                                                                                                                                                                                               R.Tillman, D.M.; Jou, N.T.; Hill, R.J.; Marion, T.N. J. Exp. Med. 176, 761-779, 1992
A;Title: Both IgM and IgG anti-DNA antibodies are the products A;Reference number: FH0971; MUID:92381444
A;Accession: PH1102
                                                                                                                                                                                                                                                                                                                                    A;Status: nucleic acid sequence not shown A;Molecule type: mRNA A;Residues: 1-104 <TIL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ig light chain V region (clone 111.61) - mouse C; Species: Mus musculus (house mouse) C; Date: 30-Sep-1993 #sequence_revision 30-Sep-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C; Accession:
```

14

PH1102

30-Sep-1993 #text\_change 21-Jan-2000

of clonally selective

```
Ig light chain V region (clones 165.45 and 163-cl) - mouse (fragment)
C:Species: Mus musculus (house mouse)
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 21-Jan-2000
C:Accession: PH1047; PH1049
R;Tillman, D.M.; Jou, N.T.; Hill, R.J.; Marion, T.N.
J. Exp. Med. 176, 761-779, 1992
A;Title: Both IgM and IgG anti-DNA antibodies are the products of clonally selection of the product of clonally selection of clonal selection of the product of clonal selection of clonal s
                                                               δã
                                                                                                                                          밁
                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 F;16-96/Domain:
                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                 138
                                     198 ESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLPTF 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              138 DIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQQKPGQSPKVLIYWASTR 197
51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                          1 DIVMSQSPSSI,AVSAGEKVTMSCKSSQSLLNSRTRKNYLAWYQQKPGQSPKLLIYWASTR 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          \vdash
                                                                                                                                                                                                             DIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQQKPGQSPKVLIYWASTR 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ESGYPDRFTG$G$G$TDFTLTIS$VQAEDLAVYYCKQ$YNLPTFG 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ESGYPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLYTF 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLRTFG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     immunoglobulin homology < IMM>
                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                      37.8%;
93.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       37.9%;
                                                                                                                                                                                                                                                                                    ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ψ
                                                                                                                                                                                                                                                                                                                      Score 497; DB 2;
Pred. No. 4.6e-29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 498; DB 2
Pred. No. 4e-29;
                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ٧.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ű
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 104;
                                                                                                                                                                                                                                                                                                                                                    Length 103
                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       products of clonally selective
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

```
A;Experimental source: B cell, strain [NZB x NZW]F1 C;Superfamily: immunoglobulin V region; immunoglobulin C;Keywords: immunoglobulin homology <IMM>
Matches
                  Query Match
Best Local Similarity
   95;
    Conservative
                 37.8%;
91.3%;
    4.
 Score 497; DB 2;
Pred. No. 4.7e-29;
4; Mismatches 5
                                                                                                          immunoglobulin homology
    ű
                                Length 104
    Indels
   0,
    Gaps
    0
```

```
밁
                                                                                                                                                                                                                                                                                                                            В
Search completed: February 12, 2001, 15:25:02 Job time: 132 sec
                                                              В
                                                                                       δõ
                                                                                                                                     δõ
                                                                                                                                                                                                                           A:Experimental source: B cell, Strain [NZB x NZW]F1
C:Superfamily: immunoglobulin V region; immunoglobulin
C:Keywords: immunoglobulin
C:Keywords: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                              A;Accession: PH1051
A;Status: nucleic acid sequence not shown
A;Molecule type: mRNA
A;Residues: 1-103 <TIL>
                                                                                                                                                              Query Match 37.4
Best Local Similarity 92.2
Matches 95; Conservative
                                                           138 DIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQQKPGQSPKVLIYWASTR 197
                                                                                                                                                                                                                                                                                                                                                                                                                                               15
                                                                                                             1 DIVMSQSPSSLAVSAGEKVTMSCKSSQSLLNRRTRKNYLAWYQQKPGQSPKLLIYWASTR 60
                                                                                                                                                               37.4%; Score 492; DB 2; 1 92.2%; Pred. No. 1.1e-28; 1tive 3; Mismatches 5;
                                                                                                                                                                                        Length 103;
                                                                                                                                                              Gaps
                                                                                                                                                                 0
```

THIS PAGE BLANK (USPTO)

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
:
    Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
  448.5
448.5
448.5
448.5
448.5
338.5
338.5
338.5
338.5
338.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
377.5
377.5
377.5
377.5
377.5
377.5
377.5
377.5
377.5
377.5
377.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Match
    88757 seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-297-181-4
1315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SwissProt_39:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                February 12, 2001, 15:26:39; Search time 16.14 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QVKLQESGAELVRSGASVNL.....YCKQSYNLPTFGGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
    32294092 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DВ
KV3D_HUMAN
KV2E_HUMAN
HV13_MOUSE
HV50_MOUSE
KV3H_HUMAN
KV3H_HUMAN
KV2A_HUMAN
                                                                                                                                                                                                  KV3R_MOUSE
                                                                                                                                                                                                                                               KV3F_HUMAN
KV3L_HUMAN
KV1V_HUMAN
                                                                                                                                                                                                                                                                                                                                          KV1Y_HUMAN
KV3L_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                          KV1W_HUMAN
KV1M_HUMAN
KV1H_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HV02_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KV5B_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HV03_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HV07_MOUSE
                                                                                                                                                                                                                                                                                                                   HV12_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                       HV1C_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (without alignments)
498.217 Million cell updates/sec
  P01633
P01755
P01747
P01633
P01755
P01746
P017746
P01744
P01760
P01605
P01605
P01605
P01606
P01756
P01624
P01756
P01624
P016362
P01631
P01631
P016329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P01625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P06313
P06314
3 homo sapien
4 homo sapien
5 homo sapien
5 homo sapien
6 mus musculu
7 mus musculu
8 mus musculu
8 mus musculu
8 mus musculu
1 homo sapien
1 homo sapien
1 homo sapien
2 homo sapien
2 homo sapien
4 homo sapien
5 homo sapien
6 homo sapien
6 homo sapien
7 mus musculu
1 homo sapien
8 homo sapien
9 homo sapien
1 mus musculu
1 homo sapien
1 mus musculu
1 homo sapien
1 mus musculu
1 homo sapien
2 homo sapien
1 mus musculu
1 homo sapien
2 homo sapien
2 homo sapien
3 homo sapien
6 homo sapien
8 homo sapien
9 homo sapien
1 mus musculu
9 mus musculu
9 mus musculu
1 homo sapien
6 homo sapien
6 homo sapien
6 homo sapien
6 homo sapien
7 mus musculu
9 mus musculu
9 mus musculu
1 homo sapien
6 homo sapien
6 homo sapien
```

B 8

Query Match, 35.3%; Best Local Similarity 75.0%; Matches 87; Conservative 1

Score 464; DB 1; 1 Pred. No. 1.2e-27; 2; Mismatches 17;

Length 133;

0;

Gaps

DR EMBL; 200022; CAA77317.1;  DR PIR; A01904; K49UUI.  DR HSSP; P01789; 2MCP.  INTERPRO; IPR003006;  DR PFAM; PF00047; 19; 1.  ET SIGNAL 1 20  FT CHAIN 21 13 IG KAPPA CHAIN V-IV REGION JI.  FT DOMAIN 44 60 COMPLEMENTARITY-DETERMINING 1.  FT DOMAIN 61 75 FRAMEWORK 2.  FT DOMAIN 76 82 COMPLEMENTARITY-DETERMINING 2.  FT DOMAIN 83 114 FRAMEWORK 3.  FT DOMAIN 115- 122 COMPLEMENTARITY-DETERMINING 3.  FT DOMAIN 115- 122 COMPLEMENTARITY-DETERMINING 3.  FT DOMAIN 115- 122 COMPLEMENTARITY-DETERMINING 3.  FT DOMAIN 123 134 FRAMEWORK 4.  FT DOMAIN 123 132 FRAMEWORK 3.  FT DOMAIN 123 132 FRAMEWORK 4.  FT DOMAIN 123 134 FRAMEWORK 4.  FT DOMAIN 123 132 FRAMEWORK 4.  FT DOMAIN 123 134 FRAMEWORK 4.  FT DOMAIN 124 FRAMEWORK 4.  FT DOMAIN 125 122 COMPLEMENT 125 125 125 125 125 125 125 125 125 125	KV4B_HUMAN  KV4B_HUMAN  KV4B_HUMAN  KV4B_HUMAN  KV4B_HUMAN  STANDARD;  PRT;  133 AA  p06313;  01-JAN-1988 (Rel. 06, Created) 01-JAN-1988 (Rel. 06, Last sequence update) 15-JUL-1999 (Rel. 38, Last annotation updat 1G KAPPA CHAIN V-IV REGION JI PRECURSOR.  Homo sapiens (Human).  Eukaryota; Metazoa; Chordata; Craniata; Ver Mammalia; Eutheria; Primates; Catarrhini; H  [1]  SEQUENCE FROM N.A.  MEDLINE=86041853; PubMed=2997712;  Klobeck H.G.; Bornkamm G.W., Combriato G., Zachau H.G.; "Subgroup IV of human immunoglobulin K ligh "Subgroup IV of human immunoglobulin K ligh single germline gene."; Nucleic Acids Res. 13:6515-6529(1985).  This SWISS-PROT entry is copyright. It is p between the Swiss Institute of Bioinformat the European Bioinformatics Institutions as long modified and this statement is not removed. entities requires a license agreement (See or send an email to license@isb.sb.ch).	34 355 27.0 108 1 KV3A_HUMAN P01619 35 354.5 27.0 118 1 KV3A_HUMAN P01672 36 354.5 27.0 138 1 HV48_MOUSE P03980 37 354 26.9 107 1 KV1D_HUMAN P01663 39 353.5 26.9 110 1 KV3A_MOUSE P03980 40 353.5 26.8 118 1 HV51_MOUSE P01671 40 352.5 26.8 108 1 KV1P_HUMAN P0166330 41 352.5 26.8 108 1 KV1P_HUMAN P016649 42 352.5 26.8 108 1 KV3A_MOUSE P016049 43 352.5 26.8 111 1 KV3A_MOUSE P01667 44 352.5 26.8 113 1 KV3A_HUMAN P016633 45 352 26.8 113 1 KV3A_HUMAN P01667 46 352 26.8 113 1 KV3A_HUMAN P01667 47 352 26.8 113 1 KV3A_HUMAN P01667
JI 2 1	Eutelect; Homo.  R., Pohl  R. is ence  through the Encorrect on restrontent by an	P01619 homo sapien P01672 mus musculu P03980 mus musculu P01596 homo sapien P01668 mus musculu P01671 mus musculu P01671 mus musculu P01603 mus musculu P01608 homo sapien P01649 mus musculu P01667 mus musculu P01667 mus musculu P01623 homo sapien P01617 homo sapien P01617 homo sapien

Š

194

```
RESULT 3
KV4A_HUMAN
ID KV4A_H
AC P01625
                                                                                                                                                                                                                                                                                                                                                                                                                 ALD DONG THE FET THE TENDENT OF THE 
                                                                                                                                        밁
                                                                                                                                                                         δÃ
                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
KV4C_H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 89
KV4A_HUMAN
P01625;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
DISULFID
NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collab between the Swiss Institute of Bioinformatics and the EMBL outst the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for comentities requires a license agreement (See http://www.isb-sib.ch/anor send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-JAN 1988 (Rel. 06, Created)
01-APR-1988 (Rel. 07, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation updat
IG KAPPA CHAIN V-IV REGION B17 PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.

MEDLINE-86041854; PubMed-2997713;

Marsh P., Mills F., Gould H.;

"Detection of a unique human V kappa
cDNA probe.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KV4C_HUMAN P06314;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SIGNAL :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PFAM; PF00047; ig;
Immunoglobulin V r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nucleic Acids Res.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (Human).
Eukaryota; Metazoa; C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (OCT-1986)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REVISION TO 76.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NTERPRO;
                                                                                                                                                                             194
                                                                                                                                                                                                                                                                   134
                                                                                                                                        77
                                                                                                                                                                                                                         17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    x02990; CAA26733.1;
A01905; K4HU17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ASTRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYYCQQYYNLPWTFGQGTKVEIK
                                                                                                                                                                                                                     GAYGDIVMTQSPDSLAVSLGERATINCKSSQSILYSSDNKNYLAWYQQKPGQPPKLLIYW
                                                                                                                                                                                                                                               GGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQQKPGQSPKVLIYW 193
                                                                                                                                                                             ASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLP-TFGGGTKLEIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P01789;
                                                                                                                                                                                                                                                                                                            ; 68
                                                                                                                                                                                                                                                                                                          Similarity 76...
89; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IPR003006;
                                                                                                                                                                                                                                                                                                                                                                                                                 134 AA;
                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       region;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           134
43
60
75
82
114
121
133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13:6531-6544(1985)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chordata;
                                                                                                                                                                                                                                                                                                                          35.2%;
76.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                 14966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                 MW;
                                                                                                                                                                                                                                                                                                          Score 463.5;
Pred. No. 1.3e
L1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                         FRAMEWORK
BY SIMILAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IG KAPPA CHAIN V-IV REGION I FRAMEWORK 1.
COMPLEMENTARITY-DETERMINING FRAMEWORK 2.
COMPLEMENTARITY-DETERMINING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FRAMEWORK 3.
COMPLEMENTARITY-DETERMINING
                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                 6413A22FD0738832 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ٧I
                                114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            update)
                                                                                                                                                                                                                                                                                                                            5; DB 1.
L.3e-27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      germline
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AA.
                                B
                                                                                                                                                                                                                                                                                                            16;
                                                                                                                                                                                                                                                                                                                                               ',;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REGION B17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gene
                                                                                                                                                                                                                                                                                                                                                  Length 134;
                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Уď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cloned
                                                                                                                                                                                                                                                                                                          1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       132
                                                                                                                                        133
                                                                                                                                                                               249
                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                commercial
                                                                                                                                                                                                                         76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                          1;
```

```
RESULT 4
KV40_HUMAN
                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                               Ωy
                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 86
                                                                                                                                       subgroup IV of the Hoppe-Seyler's Z. [2]
                 "Subgroup IV of human immunoglobulin n thymus single germline gene.";
Single germline gene.";
Nucleic Acids Res. 13:6515-6529(1985).
-!- MISCELLANEOUS: THERE IS ONLY ONE IG KAPPA V-IV GENE.
                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
DISULFID
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
DOMAIN
DOMAIN
                                                                                                                                 IG KAPPA CHAÎN V-IV REGION PRECURSOR (FRAGMENT).
Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; I
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INTERPRO: IFFUL 1
PFAM; PF00047; ig; 1
PFAM; PF00041; V region;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Salomon A.;
Submitted (AUG-1996) to
Submitted (AUG-1996) to
This SWISS-PROT entry
between the Swiss Ins
                                                                           Zachau H.G.
                                                                                     Klobeck H.G.,
                                                                                                           SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PIR; A01903; K4HULN.
HSSP; P01789; 2MCP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21-JUL-1986 (Rei. 01, Created)
01-CCT-1996 (Rei. 34, Last sequ
15-JUL-1999 (Rei. 38, Last anno
IG KAPPA CHAIN V-IV REGION LEN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Schneider M., Hilschmann N.;
"The primary structure of a monoclonic immunoglobulin-L-chain subgroup IV of the kappa type (Bence-Jones protein Len.).";
Hoppe-Seyler's Z. Physiol. Chem. 356:507-557(1975).
                                                                                                 MEDLINE=86041853;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-76004342;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REVISION TO 9.
                                                                                                                                                                                                                                                                                                198
                                                                                                                                                                                                                                                                                                                                   138 DIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQQKPGQSPKVLIYWASTR 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     !- MISCELLANEOUS: THIS
                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                      ш
                                                                                                                                                                                                                                                                            ESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYYCQQYYSTPYSFGQGTKLEIK
                                                                                                                                                                                                                                                                                       ESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLP-TFGGGTKLEIK
                                                                                                                                                                                                                                                                                                                      DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNSKNYLAWYQQKPGQPPKLLIYWASTR
                                                                                                                                                                                                                                                                                                                                                                l Similarity
86; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                1,
24
41
56.
63
95
102
114:
                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                     Bornkamm G.W.,
                                                                                                 PubMed=2997712;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PubMed-50995;
schmann N.;
 Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                          55
62
94
101
113
                                                                                                                                                                                                                                                                                                                                                                                                                       12640
                                                                                                                                                                                                                                                                                                                                                                            34.18;
76.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Last sequence
Last annotation
          is copyright.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bence-Jones protein FRAMEWORK 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the SWISS-PROT data bank.
REGION OF THIS CHAIN HAS
IS A BENCE-JONES PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                      MW;
                                                                                                                                                                                                                                                                                                                                                                 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           annotation
                                                                                      Combriato
 0f
                                                                                                                                                                                                                                                                                                                                                                           Score 448.5; DB 1
Pred. No. 1.4e-26;
                                                                                                                                                                                                                                                                                                                                                                                                                                            ВΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPLEMENTARITY-DETERMINING FRAMEWORK 3.
COMPLEMENTARITY-DETERMINING FRAMEWORK 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FRAMEWORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPLEMENTARITY - DETERMINING
                                                                                                                                                                                                                                                                                                                                                                                                                      0647F1D17F236485 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                          SIMILARITY.
 jht. It is produced through a collaboration
Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          update)
                                                                                     G
,
                                                                                     Mocikat R.,
                                                                                                                                                                                                                                                                                                                                                                                      DB 1;
                                                                                                                                                                                                                                                                                                                                                                 14;
                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 THE
                                                                                                                                            Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ANI
                                                                  encoded
                                                                                      Pohlenz
                                                                                                                                                                                                                                                                                                                                                                                       114;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ν.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (<del>3</del>
                                                                                                                                                                                                                                                                             113
                                                                                                                                                                                                                                                                                                249
                                                                                                                                                                                                                                                                                                                                                                 Ļ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MARKER
                                                                 γď
                                                                                      H.D.,
                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                 1;
```

European Bioinformatics Institute.

no restrictions

'n

no 9

way

```
RESULT
HV07_M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 78
                                                                                                                                                                                                                                                                                           P01751; P01752;
21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence up
15-JUL-1999 (Rel. 38, Last annotation
IG HEAVY CHAIN V REGION B1-8/186-2 PRE
Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DISULFID NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CHAIN
DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              use by non-profit institutions as lone modified and this statement is not remove entities requires a license agreement (Stor send an email to license@isb-sib.ch).
                                                                                                                                                       antibodies: somatic mutation evident in a gamm Cell 24:625-637(1981).
-!- MISCELLANEOUS: THE B1-8 MU CHAIN MRNA WAS
                                                                                                                                                                                                                                                                                                                                                                              MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOMAIN
                    EMBL;
                                        use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and fo entities requires a license agreement (see http://www.isb-sib.or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Immunoglobulin
SIGNAL 1
                                                                                    This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the El the European Bioinformatics Institute. There are no rest
                                                                                                                                                                                                             MEDLINE-81234548; PubMed-6788376;
Bothwell A.L.M., Paskind M., Reth
                                                                                                                                                                                                                         STRAIN=C57BL/6;
MEDLINE=81234548;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                   Baltimore D.;
                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                        Mammalia;
                                                                                                                                                                                                                                                                                   Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INTERPRO;
                                                                                                                                                                                          "Heavy chain variable region
                                                                                                                                                                                                                                                                                                                                                                                                                                             194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17
                                                                                                                                                                                                                                                                                                                                                                                                                         77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MAKING ANTIBODIES TO THE (NPB ANTIBODIES).
                                                                                                                                                                                                                                                                                                                                                                 LMOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQQKPGQSPKVLIYW 193
                                                                                                                                                                                                                                                                                                                                                                                                                                     ASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              А01902; К4НО
                                                                                                                                                                                                                                                                                                                                                                                                                         ASTRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYYCQQYYSTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAYGDIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKPGQPPKLLIYW
                     J00529;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Z00023; CAA77318.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                        Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IPR003006; -.
                                                                                                                                                                                                                                                                                   Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                     AAA38170.1;
                                                                                                                                                                                                                                                                       Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           31.8%;
74.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                institutions as long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Institute. There are no resutions as long as its content is not removed. Usage by an
                                                                                                                                                                             contribution evident in a
                                                                                                                                             HAPTEN (4-HYDROXY-3-NITROPHENYL) ACETYL
                                                                                                                                                                                                               Reth M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 418;
Pred. No. 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FRAMEWORK 3.
COMPLEMENTARITY-DETERMINING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPLEMENTARITY-DETERMINING FRAMEWORK 2.
COMPLEMENTARITY-DETERMINING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IG KAPPA CHI
FRAMEWORK 1
                                                                                                                                                                                                                                                                      Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9586AD4188D33974 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KAPPA CHAIN V-IV REGION
                                                                                                                                                                                                                                                                                                       ce update)
tion update)
2 PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                 139
                                                                                                                                                                                                                Imanishi-Kari
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (See http://www.isb-sib
                                                                                                                                                                                                                                                                                                                                                                 A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 1;
                                                                                                                                                                                          င္ပ
                                                                        here are no rest
as its content
                                                                                                                                                                              gamma
                                                                                                                                                                                         the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16;
                                                                                                                                                          CLONED FROM A HYBRIDOMP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 121;
                                                                                                                                                                              2a variable
                                                                                                                                                                                          MPb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                             238
                                                                                                                                                                                                             .
T.
                                                                                                                                                                                          family
                                                                                 he EMBL outstation restrictions on it
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and
                                                                                                                                                                                                               Rajewsky
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ν
                                                                                                  a collaboration -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      for
                                                                for
                                                                                                                                                                                         of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                              region.
                                                                                                                                                                                                                                                                        Mus
                                                     .ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         commerci
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

```
RESULT 6
KV1A_MOUSE
ID KV1A_MOUSE
AC P01632;
DT 21-JUL-1986
                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Вb
                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
  δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DISULFID
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DOMAIN
DOMAIN
DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SIGNAL
CHAIN
DOMAIN
                  DOMAIN
DOMAIN
                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Entre the European Bioinformatics Institute. There are no restructe by non-profit institutions as long as its content use by non-profit institutions as long as its content modified and this statement is not removed. Usage by and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
DOMAIN
                                                                                                                                entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
MEDLINE-81241357; Pubmed-6788890;
Kwan S.-P., Rudikoff S., Seidman
                                                                                                                                                                                                                                                                                                    Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                       21-JUL-1986
15-JUL-1999
 DOMAIN
         DOMAIN
                                               DOMAIN
                                                        DOMAIN
                                                                                                                EMBL; U29423; AAC00033.1;
                                                                                                                                                                                                               J. Exp. Med. 153:1366-1370(1981).
                                                                                                                                                                                                                        chains.
                                                                                                                                                                                                                                                                                 Mammalia;
                                                                                                                                                                                                                                                                                            Eukaryota;
                                                                                    INTERPRO;
                                                                                                                                                                                                                                  "Nucleic acid
                                                                                                                                                                                                                                                                                                               IG KAPPA CHAIN V-I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PFAM; PF00047;
                                                                  [mmunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                             137
                                                                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                [mmunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                  80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20
                                                                                                       AO:
                                                                                                                                                                                                                                                                                                                                                                                                             VSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                            APNFQGKATYTADTSSNTAYLHLSSLTSEDTTYYYCNAVIYYEYDGYA-LDYWGQGTTYT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY
                                                                                                                                                                                                                                                                                                                                                                                                                                VSS 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                  NEKFKSKATLTVDKPSSTAYMQLSSLTSEDSAVYYC---ARYDYYGSSYFDYWGQGTTLT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QVQLQQPGAELVKPGASVKLSCKASGYTFTSYWMHWVKQRPGRGLEWIGRIDPNSGGTKY
                                                                                              101915; KVMS7A.
P01789; 2MCP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                             139
                                                                  ; IPR003006; -
00047; ig; 1.
obulin y regic
                                                                                                                                                                                                                                                                                 Eutheria;
                                                                                                                                                                                                                                                                                           Metazoa;
                                                                                                                                                                                                                                                                                                                              (Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1
20
20
50
50
50
50
50
118
118
118
118
113
139
                                                                                                                                                                                                                                                                                                                        (Rel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                 and protein sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'Y'';
                                                                                                                                                                                                                                                                                                                                                              STANDARD;
region.
23
40
55
62
94
103
113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                region;
                                                                                                                                                                                                                                                                                                                      01,
01,
38,
                                                                                                                                                                                                                                                                                                              REGION
                                                                                                                                                                                                                                                                                Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30.4%;
                                                                                                                                                                                                                                                                                                                       Last sequence u
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Signal.
                                                                                                                                                                                                                                                                                                              S107A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₹.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score
Pred.
                           FRAMEWORK 1.
COMPLEMENTARITY-DETERMINING
FRAMEWORK 2.
COMPLEMENTARITY-DETERMINING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPLEMENTARITY-DETERMINING FRAMEWORK 3.
D SEGMENT.
JH2 SEGMENT.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IG HEAVY C
         FRAMEWORK 3.
COMPLEMENTARITY-DETERMINING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FRAMEWORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPLEMENTARITY-DETERMINING
                                                                                                                                                                                                                                                                               Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1B57DD4FD0C9F465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HEAVY CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                 J.G.,
ces of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                400;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        No.
                                                                                                                                                                                                                                                                                                                      on update)
                                                                                                                                                                                                                                                                                                                                                              114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6e-23;
                                                                                                                                                                                                                                Leder P., Scharff M.D. phosphocholine-binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DВ
                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REGION B1-8/186-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CRC64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 139;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                        restrictions on
                                                                                                                                                      and
                                                                                                                                                                                            D
                                                                                                                                                    for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4
                                                                                                                                                                                   collaboration .
                                                                                                                                                                                                                                , light
                                                                                                                                                                                 outstation
                                                                                                                                                                ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                      commerci
                                                                                                                                                                                                                                                                                                                                                                                                                                                   136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           50
                                                                                                                                                                no
```

```
BARARE
                                                           RESULT 8
KV5A_MOUSE
                                                                                                                                                     망
                                                                                                                                                                          Ş
                                                                                                                                                                                                   밁
                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFT
                                                                                                         밁
                                                                                                                           δõ
                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT
                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
KV5A_MOUSE

P01633;

`21-JUL-1986

21-JUL-1986

15-JUL-1999
                                                                                                                                                                                                                                                                                                   INTERPRO; IPRO33006; -.
PFAM; PF00047; 19; 1.
Immunoglobulin V region; Antiarsonate antibody; Hybridoma
NON TER 120 120
SEQUENCE 120 AA; 13307 ....
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                    idiotype response of the strain A mouse.";
Eur. J. Immunol. 12:1023-1032(1982)
-i- MISCELLANEOUS: FROM ANALYSIS OF THE SIZES OF SEVERAL
DIFFERENTIATED GENES THAT HYBRIDIZE TO THIS ONE, THE
CONCLUDE THAT ALL OF THESE V REGIONS HAVE REARRANGED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P01747;
21-JUL-1986 (Rel. 01, Created)
21-JUL-1996 (Rel. 01, Last seq
15-JUL-1999 (Rel. 38, Last ann
IG HEAVY CHAIN V REGION 36-65.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus (Mouse).
Eukaryota; Metazoa; C
Mammalia; Eutheria; F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Marshak-Rothstein A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Siekevitz M., Gefter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE-83131846; PubMed-6186498;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          138
                                                                                                         120
                                                                                                                              122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             198
                                                                                                                                                     61
                                                                                                                                                                            62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 YIGVPDRFTGSGSGTDFTLTISSVQVEDLTHYYCAQFYSYPLTFGAGTKLELK 113
                                                                                                                                                                                                                          N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ب
                                                                                                                                                                                                                                                                                                                                                               SEGMENT, JH2.
A02028; HVMSG7.
                                                                                                         S
                                                                                                                              ഗ
                                                                                                                                                     EKFKGKTTLTVDKSSSTAYMQLRSLTSEDSAVYFCARSVYYG-GSYYFDYWGQGTTLTVS
                                                                                                                                                                                                                     VKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEYA 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | DIELTQSPSSLAVSAGEKVAMSCKSSQSLENSRTRKNYLAWYQQKPGQSPKVLIYWASTR 197
                                                                                                                                                                           PNFQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTVS 121
                                                                                                                                                                                                  VQLQQSGAELVRAGSSVKMSCKASGYTETSYGINWVKQRPGQGLEWIGYINPGNGYTKYN
                                                                                                                                                                                                                                                                                                                                                                                                                                              genetic basis of antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLP-TFGGGTKLEIK 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DIVMTQSPTFLAVTASKKVTISCTASESLYSSKHKVHYLAWYQKKPEQSPKLLIYGASNR 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOUSE
                                                                                                                              122
                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity 77; Conserv
                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          114
(Rel. 01, Created)
(Rel. 01, Last sequence up
(Rel. 38, Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (Rel. 01, Created)
(Rel. 01, Last sequence update)
(Rel. 38, Last annotation updat
                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ŋ,
                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           94
114
12717 >
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chordata;
Rodentia;
                                                                                                                                                                                                                                                           29.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     M.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          X.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Brodeur P.,
                                                                                                                                                                                                                                               Score 393.5;
Pred. No. 1.5e
?0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 393.5;
Pred. No. 1.4e
l6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ВY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata; I
Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                   production: the dominant anti-arsonate
n A mouse.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          32008EC8E9DBE67B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIMILARITY
                                                149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
  update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Riblet R.,
                                                                                                                                                                                                                                              1.5e-22;
hes 27;
                                                A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .4e-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ₽
                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                     1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CRC64;
                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Murinae;
                                                                                                                                                                                                                                                                                                                                                                                      OTHER
AUTHORS
TO THE S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus
                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                       SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                   60
                                                                                                                                                                                                                                               Ļ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ۲
```

```
밁
                                                                                                                                                                             Query Match
Best Local
                                                                                                          Matches
                                                                                                                                                                         DOMAIN
DOMAIN
REPEAT
REPEAT
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                  CHAIN
DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        myeloma MPC 11.7;
Biochem. J. 171:337-347(1978).

-i- MISCELLANEOUS: THE MATURE CHAIN HAS 12 ADDITIONAL RESIDUES AMINO END, DUE TO A TANDEM DUPLICATION OF 36 NUCLEOTIDES AF CODON FOR RESIDUE 36. RESIDUE 42 CORRESPONDS TO THE AMINO-T
                                                                                                                                                                                                                                                                        DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE OF 41-149 FROM N.A.
SEQUENCE OF 41-149 FROM N.A.
MEDLINE-8017655&; PubMed-6245773;
Rabbitts T.H., Hamlyn P.H., Matthyssens G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kelley D.E., Colectough C., Perry R.P.;
"Functional significance and evolutionary development
5'-terminal regions of immunoglobulin variable-region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE OF 1-71 FROM N.A. MEDLINE-83001944; PubMed-6288267; Kelley D.E., Colectough C., Perry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EUKATYOTA; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
[1]
                                                                                                                                                                                                                                                                                                                                                                     PFAM; PF00047; ig; 1.
                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                            SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; J00561; AAA38776.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE OF 30-149.
MEDLINE-78186617; PubMed-418775;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   genes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rabbitts T.H., Hamlyn P.H., Matthys
"The variability, arrangement, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cell 29:681-689(1982).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus (Mouse)
                                                                               134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Smith G.P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Can.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IG KAPPA CHAIN V-V REGION MPC11 PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                         [mmunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Sequence of the full-length immunoglobulin kappa-chain
                         194 ASTRESGYPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNL-PTFGGGTKLEIK
92
                                                    38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESIDUE OF TYPICAL KAPPA CHAINS.
                                                                    GGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQQKPGQSPKVLIYW 193
ASYRYTGVPDRFTGSGSGTDFTFTISSVQAEDLAVYYCQQHYSTPPTFGGGTKLEIK 148
                                                    GVDGDIVMTQSHKFMSTSVGDRVSITCKASQDVSTT-----VAWYQQKPGQSPKLLIYS 91
                                                                                                                                                                                                                                                                                                                                                                                                 A01916; KVMS11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     J. Biochem, 58:176-187(1980).
                                                                                                       7,6;
                                                                                                                       Similarity
                                                                                                                                                                          1
42
65
65
76
91
91
130
130
149
149
                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                         region;
                                                                                                                                                                             149
16434
                                                                                                                                                                                                                   64
75
90
97
129
138
148
35
                                                                                                                      28.9%;
                                                                                                                                                                                                                                                                                                                                                        Signal; Duplication
                                                                                                                                                                             MW;
                                                                                                         16;
                                                                                                                      Score 380.5; DB 1; Pred. No. 1.7e-21;
                                                                                                                                                                                                                                  COMPLEMENTARITY-DETERMINING FRAMEWORK 4.
                                                                                                                                                                                                                                                                        FRAMEWORK 2.
COMPLEMENTARITY-DETERMINING 2.
                                                                                                                                                                                                                                                                                                   COMPLEMENTARITY-DETERMINING 1.
                                                                                                                                                                                                                                                                                                                IG KAPPA CHAIN V-V REGION MPC11. FRAMEWORK 1.
                                                                                                                                                                                                                                                              FRAMEWORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                             B0480C87B682AC3E CRC64;
                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rearrangement of immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Roe B.A.;
                                                                                                          18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IONAL RESIDUES AT ITS NUCLEOTIDES AFTER THE TO THE AMINO-TERMINAL
                                                                                                          Indels
                                                                                                                                  Length 149;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               genes.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of mouse
                                                                                                      7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             collaboration
                           249
                                                                                                         Gaps
                                                                                                          N
```

1,

Ş

RESULT 9
KV5B\_MOUSE

, 02

```
RESULT
HV11_M(
ID H)
AC H)
AC 2
DT 2
DT 2
OT 1
OS N
OC F
                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                    Š
                                                                                                                                                                                             B
                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P01634;
21-JUL-1986
21-JUL-1986
15-JUL-1999
                                                                                                                                                                                                                                                                                             DOMAIN
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                               DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IG KAPPA CHAIN .

Mus musculus (Mouse).

Mus musculus (Motazoa; Chordata; /
                                 P01755;
21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation updat
IG HEAVY CHAIN V REGION S43 PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and fo entities requires a license agreement (See http://www.isb-sib.or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Complete sequence of an immunoglobulin and the dideoxynucleotide method of RNA Nucleic Acids Res. 9:4485-4494(1981).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KV5B_MOUSE
              Mus musculus (Mouse).
Eukaryota; Metazoa; C
                                                                                                      MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                  PEAM; PF00047; 1g; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "The complete amino acid sequence of a mouse kappa light chain."; Biochem. J. 128:427-444(1972).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE OF 30-136.
MEDLINE=73053310; PubMed=4638343;
                                                                                          HV11_MOUSE
                                                                                                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                   CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                             SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; V00810; CAA24192.1; ALT_TERM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    the European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Svasti J., Milstein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A. MEDLINE-82059477; PubMed-6170937;
                                                                                                                                                                                                                                                                                                                                                                                                                        [mmunoglobulin
                                                                                                                                                                       194
                                                                                                                                                80
                                                                                                                                                                                            26
                                                                                                                                                            ASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLF-TFGGGTKLEIK 249
                                                                                                                                                                                                       GGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQQKPGQSPKVLIYW 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                        A01917;
                                                                                                                                                ASNRYTGVPDRFTGSGSATDFTLTISSVQAEDLADYHCGQGYSYPYTFGGGTKLEIK 136
                                                                                                                                                                                            GADGNIVMTQSPKSMSMSVGERVTLTCKASENVV-----TYVSWYQQKPEQSPKLLIYG 79
                                                                                                                                                                                                                                                   Similarity
    Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (Rel. 01, Creace)
(Rel. 01, Last sequence update)
(Rel. 38, Last annotation update)
(Rel. 38, Mart annotation update)
                                                                                                                                                                                                                                                                                                                               1
30
30
53
53
64
79
86
118
                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                        KVMS21.
                                                                                          STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                        region;
                                                                                                                                                                                                                                                                                                          136
52
63
78
78
117
117
126
136
 Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>ر</u>.
                                                                                                                                                                                                                                                  28.8%;
                                                                                                                                                                                                                                                                                               14902
                                                                                                                                                                                                                                                                                                                                                                                                                      Signal.
                                                                                                                                                                                                                                                                                               Œ.
                                                                                                                                                                                                                                        18;
                                                                                                                                                                                                                                      Score 378.5; DB Pred. No. 2.2e-28; Mismatches
                                                                                                                                                                                                                                                                                                                               FRAMEWORK 3.
COMPLEMENTARITY-DETERMINING
                                                                                                                                                                                                                                                                                                                                                     FRAMEWORK 2.
COMPLEMENTARITY-DETERMINING
                                                                                                                                                                                                                                                                                                                                                                                      IG KAPPA CH
FRAMEWORK 1
                                                                                                                                                                                                                                                                                                                                                                           COMPLEMENTARITY-DETERMINING
 Craniata; Vertebrata; I
Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                               8CDD85113996D1C2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                 KAPPA CHAIN V-V REGION MOPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       136
                                                                                           137
                                            update)
                                                                                                                                                                                                                                                                                                                     4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     There are no rest
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mRNA using sequencing.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A
                                                                                           A
                                                                                                                                                                                                                                                             띪
                                                                                                                                                                                                                                        18;
                                                                                                                                                                                                                                                            1;
                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    specific priming
              Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Murinae; Mus
   Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   he EMBL outstation restrictions on i
                                                                                                                                                                                                                                                                                                                                                 2
                                                                                                                                                                                                                                                             136;
                                                                                                                                                                                                                                                                                                                                ω
                                                                                                                                                                                                                                                                                                                                                                           ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a collaboration -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              for
                                                                                                                                                                                                                                       7;
                                                                                                                                                                                                                                                                                                                                                                                                   21.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'n
                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                commercia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           way
                                                                                                                                                                                                                                       2
```

```
ğ
                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                               맑
                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                          Best
                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                    HV02_MOUSE STANDARD; PRT; 140 AA P01746; P01746; 21-JUL-1986 (Rel. 01, Created) 21-JUL-1986 (Rel. 01, Last sequence update) 15-JUL-1999 (Rel. 38, Last annotation updat IG HEAVY CHALN V REGION 93G7 PRECURSOR.
                                                                                                                                                  _MOUSE
                                                                                                                                                                                                                                                                                                                                                                NON_TER
SEQUENCE
 MEDLINE=82152813;
Sims J., Rabbitts
Capra J.D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           antibodies: somatic Cell 24:625-637(198)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE-81234548; PubMed-6788376; Bothwell A.L.M., Paskind M., Reth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; J00539; AAA38172.1; PIR; A02038; G2MS43.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. between the Swiss Institute of Biol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Heavy chain variable region antibodies: somatic mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Baltimore D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     [1]
SEQUENCE FROM
                               STRAIN=A,
                                       SEQUENCE FROM N'A.
                                                            Mammalia; Eutheria;
                                                                                Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                      DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                           DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PFAM; PF00047;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the European Bioinformatics Institute.
                                                                      Eukaryota; .Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                   DISULFID
                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                      DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INTERPRO;
                                                                                                                                                                                          136
                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      [mmunoglobulin
                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                80
                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                       20
                                                                                                                                                                                                                                                                                            ب
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MISCELLANEOUS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (NPB ANTIBODIES).
                                                                                                                                                                                                                                                                                  QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MAKING ANTIBODIES TO THE
                                                                                                                                                                                          SS
                                                                                                                                                                                                             SS
                                                                                                                                                                                                                               NEHFRSKATLTIDKPSSTAYMQLSSLTSEDSAVYYC---ARYRLGRY-FDYWGQGTTLTV
                                                                                                                                                                                                                                                   APNFQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                                                                                                                                                                                                                                                        QVQLQQPGAE;VKPGASVKLSCKASGYTFTSYLMHWVNQRPGRGLEWIGRIDPNSGGTTY
                                                                                                                                                                                                              122
                                                                                                                                                                                          137
                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IPR003006; -.
                                                                                                                                                                                                                                                                                                                                                                1
20
20
50
50
50
69
86
118
123
123
137
                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N.A.
                                                                                                                                                                                                                                                                                                                                                                 Ä,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                , <del>1</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     region;
           PubMed=6801765;
T.H., Estess P.,
                                                                                                                                                                                                                                                                                                                                                                137
15200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  THE GAMMA-2A CHAIN MRNA WAS CLONED
                                                           Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                      28.7%;
61.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .'
                                                                                                                                                                                                                                                                                                                                                                MW;
                                                                                                                                                                                                                                                                                                               11;
                                                                                                                                                                                                                                                                                                                                                                                             FRAMEWORK 3.
D SEGMENT.
JH2 SEGMENT.
                                                                                                                                                                                                                                                                                                                         Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HAPTEN (4-HYDROXY-3-NITROPHENYL)ACETYL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   contribution evident in a
                                                                                                                                                                                                                                                                                                                                  Score
                                                                                                                                                                                                                                                                                                                                                                                                                                             IG HEAVY CHAIN V REGION S43.
FRAMEWORK 1.
COMPLEMENTARITY-DETERMINING
                                                                                                                                                                                                                                                                                                                                                                                   JH2
BY S
                                                                                                                                                                                                                                                                                                                                                                                                                           COMPLEMENTARITY-DETERMINING
                                                                                                                                                                                                                                                                                                                                                                                                                                     FRAMEWORK 2
                                                           Sciurognathi;
                                                                     Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                ADD5881BF44B8EC9 CRC64;
                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                   SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bioinformatics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .
.
                                                                                                                                                                                                                                                                                                                        ± 378; _
           Slaughter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          It is produced through
                                                                                                 update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Imanishi-Kari T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      There are
                                                                                                                                          A
                                                                                                                                                                                                                                                                                                                        .4e-21;
                                                                                                                                                                                                                                                                                                                                  DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gamma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             as its content
                                                            Muridae;
           ი,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Usage
                                                                                                                                                                                                                                                                                                                32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and
                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NPb
           Tucker P.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    variable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  by and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the
                                                            Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               family
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      restricti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rajewsky K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A HYBRIDOMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               O.F
                                                                                                                                                                                                                                                                                                                4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   region.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ons
                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   commercia.
                                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                        79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              way
                                                                                                                                                                                                                                                                                                               2;
```

SO PTING

```
RESULT
HV01_M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                   P01745;
21-JUL-1986;
21-JUL-1986;
15-JUL-1999;
                                                                                                                                                                          Zakut R., Cohen J., Givol D.;
"Cloning and sequence of the cDNA corresponding region of immunoglobulin heavy chain MPC11.";
Nucleic Acids Res. 8:3591-3601(1980).
[2]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL;
PIR; /
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
 SEQUENCE
                                                                                                                                                                                                                                                    SEQUENCE FROM N.A. MEDLINE-81053741; PubMed-6253904;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              use by non-profit institutions as long as its content modified and this statement is not removed. Usage by an entities requires a license agreement (See http://www.isborsend an email to license@isb-sib.ch).
                NON
                               PFAM; PF00047; ig; 1.
Immunoglobulin V region.
                                                                                                                             Nucleic Acids Res.
                                                                                                                                                                                                                                                                                                                                    IG HEAVY CHAIN V REGION MPC 11.
Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                  HV01_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INTERPRO; IPR003006; -. PFAM; PF00047; ig; 1. Immunoglobulin V region;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Science
                                                                                                                                                                                                                                                                                                        Mammalia; Eutheria;
                                                                :NTERPRO;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           immunoglobulin heavy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 SS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          سر
                                                                                            leic Acids Res. 8:4839-4840(1980).
MISCELLANEOUS: THIS SEQUENCE WAS TRANSLATED
FROM A MYELOMA THAT SECRETES IGG2B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; J00493; AAA38128.1;
A02028; HVMSG7.
                                                                             A02027; GVMS11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ss-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APNEQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NEKFKGKTTLTVDKSSSTAYMQLRSLTSEDSAVYFCARSHYYG-GSYDFDYWGQGTPLTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EVQLQQSGAELVRAGSSVKMSCKASGYTFTSYGINWVKQRPGQGLEWIGYINPGNGYINY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          216:309-311(1982)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mutation in
                                                                                                                                         Cohen J.,
                                                 IPR003006; -.
0047; ig; 1.
                                                                                                                                                                                                                                                                                                                        Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       140
                                                                                                                                                                                                                                                                                                                                                                   (Rel. 01, Created)
(Rel. 01, Last sequence up)
(Rel. 38, Last annotation)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20
140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ã,
                                                                                                                                                                                                                                                                                                                                                                                                                                    STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      140
140
121
13135
                                                                                                                                                                                                                                                                                                      Rodentia;
                                                                                                                                           Givol D.;
                                                                                                                                                                                                                                                                                                     Chordata; Craniata; Vertebrata; Euteleostomi; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15514 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         chain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Antiarsonate
 W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            for the variable portion of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 376.5;
Pred. No. 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IG
 227AEF3EC56ED0BF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25A4CBBE31DA5CE8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HEAVY CHAIN V REGION 93G7
                                                                                                                                                                                                                                                                                                                                                                   on update)
                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   antibody; Hybridoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        le-21;
les 31;
                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1;
 CRC64;
                                                                                                              FROM
                                                                                                                                                                                                                          ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                          the
                                                                                                             AN
                                                                                                                                                                                                                            variable
                                                                                                             MRNA ISOLATED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ۳
```

В δÃ 밁 Q 밁 Ş

SOUR REPRESENTATION OF THE PROPERTY OF THE PRO

Query Match

28

Score

375.5;

BB

۲

Length

```
Ş
                                                                                                                                 Š
                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ΩV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                           Matches
                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local
                                                                                                                                DISULFID
NON_TER
SEQUENCE
                                                                                                                                                                                      DOMAIN
DOMAIN
                                                                                                                                                                                                           DOMAIN
DOMAIN
                                                                                                                                                                                                                                            CHAIN
                                                                                                                                                                                                                                                                 PEAM; PE00047; 'ig;
                                                                                                                                                                                                                                                                                                                                        the European Bioinformatics Institute. The use by non-profit institutions as not removed modified and this statement is not removed. entitles requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Extremental Buropean Bioinformatics Institute. There are no restruce by non-profit institutions as long as its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; X00965; CAA254'
PIR; A01883; K1HUWK.
                                                                                                                                                                                                                                                                                                                                                                                                                                        Klobeck H.G., Combriato G., Zachau H.G.; "Immunoglobulin genes of the kappa light c lymphoid cell lines are closely related.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HUMAN
                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                        SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota;
                                                                                                                                                                 DOMAIN
                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                      INTERPRO;
                                                                                                                                                                                                                                                                                                                                                                                                                                Nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=85014148; PubMed=6091049;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens (Human)
            194
                                                      134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                      Local Similarity
                                 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 APNEQGKATVTADTSSNTAYLHLSSLTSEDTTVYYCNAVIYYEYDGYALDYWGQGTTVTV 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KAPPA CHAIN V-I REGION WALKER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ۳
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QVKLQESGAELVRSGASVNLSCTASGFNIKDYYMHWVKQRPEEGLEWIGYIDPESGETEY
                                                  GGGSDIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQQKPGQSPKVLIYW 193
           ASTRESGYPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYN-LPTFGGGTKLEIK
                                 GARCDIOMTQS:PSSLSASVGDRVTITCRASQSI-----SNYLNWYQQKPGKAPKLLIYA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NDNLKGKATLTADTSSSTAYIQLSSLTSEDSAIYHCARGIYYNSSPY-FDSWGQGTTLTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EAQLQQSGAELVRPGTSVKISCKAAGYTFTNYWIGWVKERPGHGLEWIGDIYPGGGFTNY
                                                                                                                                                                                                                                                                                  P01607; 1REI.
PRO; IPR003006;
 :
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   72; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                               Acids Res. 12:6995-7006(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         122
                                                                                                                                                                                    1
23
23
72
79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                            Conservative
                                                                                                                                                                                                                                                                                                                      CAA25477.1;
region;
                                                                                                                                                                129
45
56
71
78
110
119
                                                                                                                                 14069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chordata;
                                                                                     28.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              59.0%;
                                                                                                                                                                                                                                                                 Signal.
                                                                                                                                 ¥.
                                                                                                                                                                                                                                                                                                                      ALT_TERM.
                                                                                                                                                             IG KAPPA CHAIN V-I REGION WALL FRAMEWORK 1.
COMPLEMENTARITY-DETERMINING 1 FRAMEWORK 2.
COMPLEMENTARITY-DETERMINING 2 FRAMEWORK 3.
COMPLEMENTARITY-DETERMINING 3 FRAMEWORK 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18;
                                                                            20;
                                                                                      Score 371.5; DB 1 Pred. No. 6.6e-21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No. 3.208; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Craniata; Vertebrata; Euteleostomi;
                                                                                                                                 F941FA07D4AFC2F9
                                                                            Mismatches
                                                                                                                                                                                                                                            KAPPA CHAIN V-I REGION WALKER.
                                                                                                                                                                                                                                                                                                                                                     (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3.2e-21;
nes 31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     chain
                                                                                                                                                                                                                                                                                                                                                                Usage
                                                                                                ۳.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     type
                                                                                                                                 CRC64
                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                      from
                                                                                                                                                                                                                                                                                                                                                                                      restrictions
                                                                                                                                                                                                                                                                                                                                                                and
                                                                                                                                                                                                                                                                                                                                                                                                EMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                       two
                                                                                                   129;
                                                                         7;
                                                                                                                                                                                                                                                                                                                                                                 tor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ۲,
                                                                                                                                                                                                                                                                                                                                                                                                   - collaboration
- outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                      human
                                                                                                                                                                                                                                                                                                                                                                                                outstation
                                                                                                                                                                                                                                                                                                                                                                            'n
                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                 commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                                                                                                                            00
                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                            2
```

밁

73

ASSLQSGVTSRFSGSGSGTDFTLTISSLQPEDSATYYCQQSYSTLITFGQGTRLEIK 129

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ALD DARK REPORT OF THE PROPERTY OF THE PROPERT
                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
       RRA RRA
                                                                                                                                                                                                                                                                                                                                    RESULT 15
KV1H_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 71; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KV1M_HUMAN P01605;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                             P01600;
21-JUL-1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PIR; A01871; K1HULY.
HSSP; P01607; 1REI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21-JUL-1986 (Rel. 01, Last seg
15-JUL-1999 (Rel. 38, Last ann
IG KAPPA CHAIN V-I REGION LAY.
Watanabe S., Hilschmann N.;
"The primary structure of a monoclonal kappa-type immunoglobulin
                                                                                                                     Homo sapiens (Human)
Eukaryota; Metazoa; (
Mammalia; Eutheria; )
                                                                                                                                                                                                                 21-JUL-1986
15-JUL-1999
                                                                                                                                                                                                                                                                                                                KV1H_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PFAM; PF00047;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Capra J.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens (Human).
                                                SEQUENCE.
MEDLINE=71032830; PubMed=4097974;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IgM anti-gamma globulins (Lay/Pom) with shared
specificities.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=77038198; PubMed=824717;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NTERPRO;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Complete amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mmunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ب
                                                                                                                                                                                           KAPPA CHAIN V-I REGION HAU.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .nd. J. Immunol. 5:677-684(1976).
MISCELLANBOUS: THE SECOND AND THIRD HYPERVARIABLE REGIONS OF THIS CHAIN ARE IDENTICAL WITH THOSE OF THE HUMAN POM V-III KAPPA CHAIN, WITH WHICH IT SHARES CERRAIN IDIOTYPIC DETERMINANTS.
MISCELLANEOUS: THIS CHAIN WAS ISOLATED FROM AN IGM WITH ANTI-GAMMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GLOBULIN ACTIVITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNL-PTFGGGTKLEIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DIELTQSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQQKPGQSPKVLIYWASTR 197
                                                                                                                                                                                                                                                                                                                                                                                                                                 EAGVPSRFSGSGSGTDFTFTISSLQPEDIATYYCQQYNNWPPTFGQGTKVEVK 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DIQMTQSPSSLSVSVGDRVTITCQASQNV-----NAYLNWYQQKPGLAPKLLIYGASTR 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IPR003006;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (Rel. 01, Created)
(Rel. 01, Last sequence update)
(Rel. 38, Last annotation update)
                                                                                                                                                                                                                 (Rel. 01, Last sequence up (Rel. 38, Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Klapper
                                                                                                                                                                                                                                                                (Rel. 01, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    acid sequence of the variable domains of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      region.
23
34
49
56
88
97
107
                                                                                                                       Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          D.G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11834 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 369.5;
Pred. No. 7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPLEMENTARITY-DETERMINING FRAMEWORK 4.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPLEMENTARITY-DETERMINING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FRAMEWORK 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FRAMEWORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPLEMENTARITY-DETERMINING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FRAMEWORK 1
                                                                                                                       Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     739993A95431434A CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                               on update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              108
                                                                                                                                                                                                                                                                                                              108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ΑA
                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .6e-21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              idiotypic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 108;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      two
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
       ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2
```

```
Š
                                            밁
                                                                                밁
                                                                                                Š
                                                                                                                                                                                    Search completed:
Job time: 195 sec
                                                                                                                    Query Match
Best Local S
Matches 70
                                                                                                                                                                DISULFID
NON_TER
SEQUENCE
                                                                                                                                                                                                    DOMAIN
DOMAIN
DOMAIN
DOMAIN
                                                                                                                                                                                                                                         DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                       chain of subgroup I (Bence-Jones Protein Hau): subdivision within subgroups.";
                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                                                        Immunoglobulin V re
                                                                                                                                                                                                                                                                    PFAM; PF00047;
                                                                                                  138
                                                                                                                                                                                                                                                                                              PIR; A01868; K1HUHU.
                                                              198
                                                                                                                                                                                                                                                                              [NTERPRO;
                                            55
                                                                                 μ.
                                          PSGVPSRRSGSGSTDFTLTISSLQPEDFATYYCQQNYITPTSFGQGTRVEIK
                                                              ESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCKQSYNLPT-FGGGTKLEIK 249
                                                                                DIQMTQSPSSLSASVGDRVTITCRASQSI-----SSYLSWYQQKPGKAPQVLIYAASSL
                                                                                                 DIELTOSPSSLAVSAGEKVAMSCKSSQSLFNSRTRKNYLAWYQQKPGQSPKVLIYWASTR 197
                                                                                                                                                                                                                                                                                       P80362;
                                                                                                                            Similarity
                                                                                                                                                                                                                                                                             IPR003006; -.
                                                                                                                                                                  108
                                                                                                                    Conservative
                                                                                                                                                                                    57
57
58
98
       February
                                                                                                                                                                                                                                                           region;
                                                                                                                                                                                    34
49
56
88
97
107
                                                                                                                          27.98;
                                                                                                                                                                  11671
        12,
                                                                                                                                                                                                                                                  Bence-Jones protein FRAMEWORK 1.
                                                                                                                                                                  WW;
        2001, 15:26:39
                                                                                                                    Score 367.5; DB 1
Pred. No. 1.1e-20;
2; Mismatches 14
                                                                                                                                                                                  COMPLEMENTARITY-DETERMINING FRAMEWORK 3.
COMPLEMENTARITY-DETERMINING FRAMEWORK 4.
BY SIMILARITY.
                                                                                                                                                                                                                                COMPLEMENTARITY-DETERMINING FRAMEWORK 2.
                                                                                                                                                                  08D3A6160D8D0618 CRC64;
                                                                                                                                                                                                                                                                                                                CHAIN HAS THE INV (3) MARKER
                                                                                                                     14;
                                                                                                                                      ۲.
                                                                                                                                      Length
                                                                                                                     Indels
                                                                                                                                        108;
                                            107
                                                                                                                    7;
                                                                                                                    Gaps
                                                                                 54
```